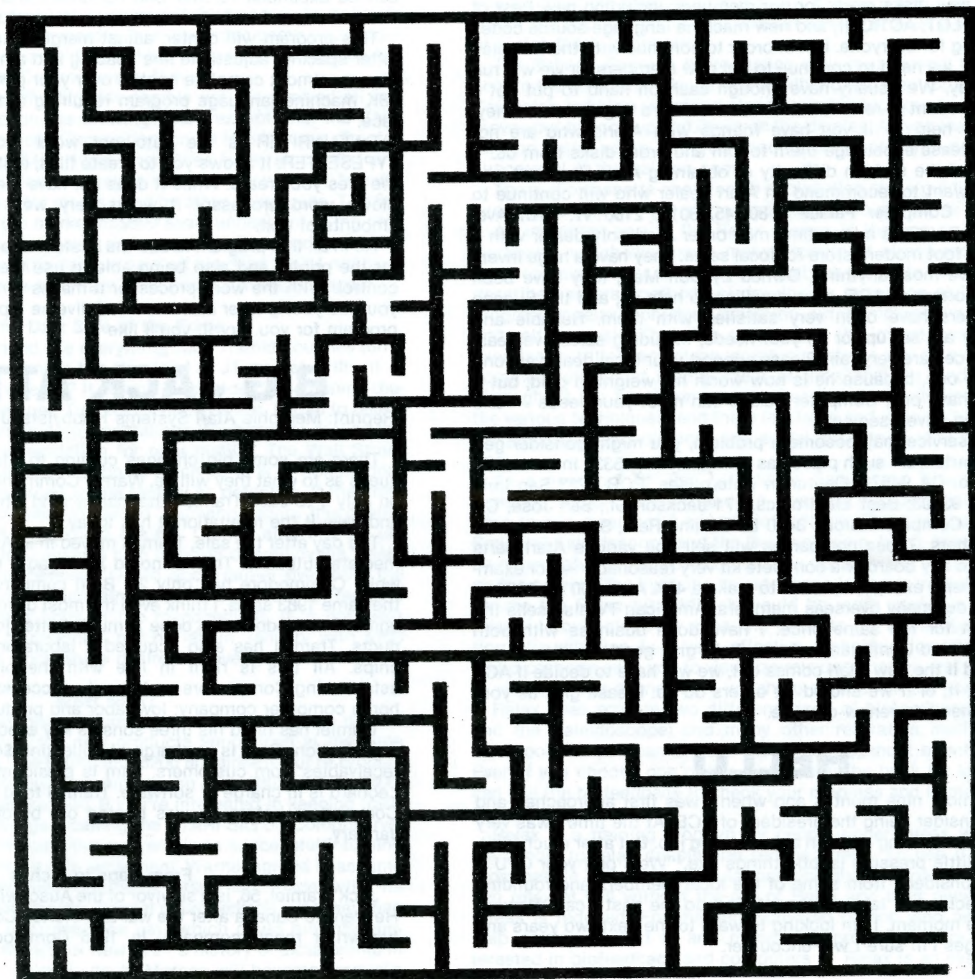


ATARI
COMPUTER
ENTHUSIASTS

3662 Vine Maple Dr. Eugene OR 97405

SEPTEMBER, 1984

Editors: Mike Dunn, Jim Bumpas, Larry Gold



MAZE by STAN OCKERS

EDITORIAL

by Mike Dunn, Co-Editor

It has been the practice of ACE to have very few editorials, to present mostly news, reviews and programs. Recent events in the world of Atari have changed everything for all Atari owners, and I feel all of us need to know what is happening and then plan for the future of ACE and other user groups. As I am sure everyone knows, Atari, Inc. is now owned by Jack Tramiel of Commodore fame.

What most of us do not realize is that our Atari is dead. They are not manufacturing any of the old units; and when the present stock is gone, that's it. There is no user group support, customer support, etc. Knowing the history of Commodore, where frequently even different versions of the same model were incompatible, and none of the different models were compatible, it is very unrealistic to expect any new models from the new Atari to have any compatibility with the old ones. We are now on our own, friends.

Most of the large distributors, used by the dealers and small stores, such as Softsel and Micro-D are dropping the Atari lines. Most local dealers have dropped the Atari lines, according to the many User Group Newsletters we receive each month. All of this makes the present Atari User groups more important to the many Atari owners, if they are going to continue to use their Ataris. And the Atari is still the best value for an inexpensive home computer!

What does this all mean to ACE. Well, since most of our new members have come from new Atari owners, we will lose our growth and base of members, and possibly gradually die, unless we are really needed and grow. Several things we have done recently include the vastly expanded Bulletin Board now being developed and debugged, to include a 1200 Baud modem soon. If you have tried our BBS lately, there has not been much on it since we are testing a new system, but it is almost ready and will have 1.5 MegaBytes on-line with many new features — please see Larry Gold's article for details. We have a number of new disks ready for our members, including new Best of ACE, new PILOT, ACTION!, and new machine language source codes — something for everyone. But in order to continue with the Newsletter and Club, we need to continue to get new members, or we will run out of money. We usually have enough cash on hand to put out 3 issues, then count of renewals and new members to generate money. You can all help — if you have friends with Ataris who are not members, please encourage them to join and order disks from us.

Because of the sudden difficulty of obtaining Atari Hardware and Software, I want to recommend an Atari dealer who will continue to support us. **Computer Palace** (1-800-452-8013, 2160 W. 11th Ave, Eugene, OR 97402) is a long time mail order Atari only dealer with a 3500 square foot modern store for local sales. They have a huge inventory and have most anything. Owned by Don Marr, they have been strong supporters of ACE, always willing to help us, and the Eugene ACE members have been very satisfied with them. Reliable and honest, they are set up for all your needs, including sales overseas, and their prices are very fair. Please support your local dealer as long as you have one, because he is now worth his weight in gold, but if you do not have one, Computer Palace can meet your needs — and this is not an advertisement.

Because service may become a problem, you might consider getting spare parts from such places as American TV, 15338 Inverness St San Leandro, CA 94579; Centurian Enterprises, POB 3233 San Luis Obispo, CA 93403; Best Electronics, 171 Jackson St., San Jose, CA 95112; B&C ComputerVisions 3400 El Camino Real, Santa Clara, CA 95051 or others. These companies will sell you various Atari parts from chips to any board or a complete kit very reasonably — for example, all the parts except keyboard to make a 48K Atari 800 for \$135 or so. And for our many overseas members, American TV also sells the PAL version for the same price. I have done business with both American TV and Centurian and they both give good service.

When and if the new Atari comes out, we will have to decide if ACE will support it, or if we should let others do so. Please give us your thoughts when you renew or write.

HELLO

It was almost nine months ago when I was first approached and asked to consider being the president of ACE. At the time I was very apprehensive of taking on such a demanding job. But after much kibitzing and a little pressure (subtle things like, "We'll pull your CPU if you don't consider") from some of the local members and founding fathers, I decided to take on the job and do the best I can. Now, at least for the moment, I am looking forward to the next two years and the challenges I'm sure I will encounter.

Users groups, like ACE, are supposed to be just that, a group for the user. New or old, young or old, we are supposed to be helping you become literate in the use of your computer. Up until now ACE has done an excellent job in helping you become more aware of the potential of your computer. But even we have been lacking in some areas. So we are going to try and tune up some of our weak points and try to give you more down to earth information you will be able to use.

We have already made some changes which will be evident first in the local meetings, and then some of them may eventually be seen in the newsletter. Each month's meeting will be based on a theme or common subject. (The next three months subjects are: Sept.-Disk Drives, Oct.-Education, Nov.-Piracy). We will be choosing other topics based on an interest survey, so we will be presenting information you want to hear.

In Kirt Stockwell's farwell article in the last issue, he mentioned two important areas we need to keep aware of: good educational material and software piracy. Those of you who are quick of mind will have noticed two of our first topics cover just those points. The role of user groups in producing good educational software and in reducing software piracy cannot be over stressed. We as a group need to be active in these areas so you as individuals will have more quality programs for your use. You will be hearing more of these topics in the near future.

Well I've said my hello, now it's time to say goodbye. I sincerely thank all of those who have given me their support. I look forward to serving you, and learning with you.

Robert Browning
ACE President

TYPESETTER

Typesetter (DATAARTS SOFTWARE, P.O. Box 1613, Troy, N.Y., 12181. \$30) is a unique and comprehensive type setting system and simple word processing program with four typefaces. The program can be expanded to over one hundred fonts, each with upper and lower case, and includes numbers and punctuation.

This program will center, adjust margins, use form feeds, variable letter spacing, adjustable line spacing and a host of other things giving you almost complete control over your printer. It does this with a 48K machine language program requiring a disk drive and an interface.

DATAWRITER is the auto-boot word processor program with TYPESETTER. It allows you to create files, edit, print and save to disk the files you create. While it does not have the full functions of a full blown word processor it works very well for letters, and small amounts of text.

All in all this program is one the bests I have used for creating fonts for the printer and also being able to use them with such complete control. With the word processor it makes it more fully integrated. If you use your printer alot and need diverse typefaces then this is the program for you. Try it, you'll like it.

— Larry Gold

BIG JACK ATTACK

(Reprint: Memphis Atari Systems Hobbyists, July 1984)

There are some big changes coming to Atari, and it's anybody's guess as to what they will be. Warner Communications sold Atari, Inc. on July 1 to Jack Tramiel, the mastermind who created Commodore and gave it the reputation it has today.

The day after the sale, Tramiel moved in at Atari and announced immediate cutbacks. Tramiel noted Atari had a marketing staff of 300, while Commodore had only 25. Both companies had approximately the same 1983 sales. I think even the most devout Atari enthusiast will agree Commodore has done a much better job of selling their products. Tramiel has also acquired a laboratory for designing micro chips. All this is right in line with the philosophy he used in establishing Commodore as the only successful (in terms of profits) home computer company: low labor and production costs.

Tramiel has hired his three sons as key executives in the new Atari organization. Gary is in charge of collecting \$400 million in past due receivables from customers. Sam is president of the company, and Leonard is in charge of software. Tramiel tried to get the "kids" on at Commodore before he was booted out by other investors back in January.

From Rags to Riches

Jack Tramiel, 56, is a survivor of the Auschwitz concentration camp. He went to Canada after the war and started Commodore in 1958 as a typewriter repair company. In 1965 Commodore, which was now

manufacturing typewriters, almost went bankrupt, but Tramiel found a fellow named Irving Gould who invested \$400,000 and saved the company. Gould was a passive owner, letting Tramiel run the company in his own style. Tramiel did a brilliant job. When pocket calculators came on the market in the 70's, Commodore purchased chips from Texas Instruments for \$50 each, assembled them into calculators, and sold them for \$100. The company did well until 1975, when TI began selling their own calculators for \$50. Again, Commodore almost went bankrupt. But Tramiel's hard-nosed business methods brought the company back to life.

After the pocket calculator debacle, Tramiel swore he would never again be at the mercy of outside suppliers for parts. In 1976, Tramiel bought MOS Technologies, a semiconductor maker about to go under. MOS had designed an inexpensive and versatile chip called the 6502, which is now used in Atari and Apple computers. Tramiel licensed it to Rockwell and Honeywell. MOS also employed a fellow named Charles Peddle, who later started Victor Technologies. Peddle had been working on a project at MOS designing what he hoped would be the first microcomputer, using the 6502 chip. Tramiel named the computer "Pet" and began selling the machine in Europe in 1977, leaving the American market to Apple and Radio Shack. The Pet became the best selling computer in Europe and Commodore was again profitable.

Next came the video game craze. Atari was first here with its 2600 game machine and cartridges. Soon Mattel, Coleco, and several other companies had their machines on the market and business was booming. But Tramiel decided not to sell these "dumb" machines. Instead he introduced the VIC-20 in 1981, a "smart" game machine with a keyboard. Using William Shatner as the company's spokesman, he duped the public into believing the VIC was really a computer. The play worked, and Commodore made a lot of money. Tramiel's smartest move in the video game era was his decision not to manufacture or sell game cartridges. He encouraged third parties to make the cartridges for the VIC. A few months later the video game craze slowed down and millions of unsold cartridges were returned to manufacturers. Everyone except Commodore suffered.

In 1982, Tramiel took the biggest gamble yet. He shelved all products Commodore had on the drawing board except one, the Commodore 64. All the resources Commodore could muster were directed towards manufacturing 64s. Huge inventories were stockpiled and Tramiel arranged for discount stores to sell the new product, bypassing the traditional computer stores used by other companies. The 64s were then dumped on the market at \$600 each, unheard of at the time for a 64k computer with sound and graphics. Commodore risked everything on the 64, but the gamble paid off big. Had the 64 not been a success, Commodore would have flirted with bankruptcy again.

The Dark Side of the Force

So far I've made it sound like everything Jack Tramiel touches turns to gold. But every silver lining has its cloud. If JT was so brilliant at Commodore, why did he leave? It seems Irving Gould, the behind-the-scenes investor who rescued Tramiel 20 years earlier, began to take a more active role in Commodore's operations. He began to realize the company had gained a reputation for poor quality. The Wall Street Journal reported several months ago as much as 40% of Commodore products were being returned to the factory as defective. If the company had not had a "no questions asked" exchange policy this quality control problem could have killed the 64. Tramiel also has an unpredictable temper which causes a high turnover of employees. There were heated arguments between Gould and Tramiel over how the company should be run. The final straw was Gould's veto of Tramiel's decision to put his three sons in top management. It is not clear whether JT was fired or resigned, but he left in January with \$100 million in Commodore stock and a desire for revenge.

What Next?

Although nothing has been officially announced, there are rumors (typical of Atari). Most of the new products announced at the June CES could be dropped. The 600XL and 5200 are already out of production. Tramiel will probably concentrate on the 800XL. The 7800, 1450XL and 1090 will be dropped. If you're interested in keeping track of the latest gossip, I suggest calling the ATARI SIG on Compuserve.

What about James Morgan, the man who was successfully turning Atari around? As part of the sale agreement, Warner agreed to assume liability for all employment contracts Atari had made with its employees. In effect, this means Tramiel could replace every key man in Atari and not incur any severance pay, which could run into hundreds of thousands of dollars. In view of JT's history of dictatorship in running Commodore, I seriously doubt Morgan will become Tramiel's servant at Atari.

All things considered, I have mixed feelings about the sale of Atari. It marks the end of a very short but fascinating case history on how not to run a company. Atari was conceived so brilliantly by Nolan Bushnell in the late 70's, and so cruelly run into the ground after he sold out to Warner. It is a story which will be published in college textbooks and analyzed by students for years to come.

— Les Edwards

RELAX

RELAX (\$100, Synapse Software) is a complete stress reduction system produced by a team of clinical psychologists working with programmers. The Atari version runs on the the 400, 800 and XL computers. The back of the disk runs on the Commodore 64. Other versions are available for Apple IBM PC and PCjr.

The Relax package includes biofeedback hardware, a program disk and cassette, an audio cassette, an instruction manual, and a workbook.

The Relax hardware consists of a headband with sensors to pick up muscle tension levels and an electromyograph unit which plugs into a joystick port on the Atari and sends the muscle tension information from the headband sensors to the Relax software running in the computer.

There are three options included in the Relax software which produce 3 different displays on the screen: a Relax Graph; a Sensoral Kaleidoscope; and a Balloon Game.

The Relax Graph provides a continuous trace on a 500 point scale of your relative muscle tension level as you sit quietly wearing the headband. With practice, the information on the graph should help you learn to relax more deeply and more easily.

The Sensoral Kaleidoscope is a colorful and rather hypnotic, constantly changing kaleidoscope display. The color and pattern changes follow the fluctuations in your tension level to provide a different kind of biofeedback information.

The Balloon Game is played using only your muscle tension level sent to the computer through the headband and electromyograph unit. You catch bubbles and avoid pins by controlling your tension level to move your balloon up and down on the display. As you learn to control tension better using the graph and kaleidoscope, you become more successful at the balloon game.

The audio cassette contains an explanation and a guided relaxation exercise to help you get started learning to reduce stress using Relax.

An important part of the Relax system is the very good 200 page workbook, which discusses many aspects of stress reduction. The book explains stress and how biofeedback works to reduce stress. It describes several methods of developing relaxation skills including progressive relaxation, deep breathing, autogenic training, meditation, and self hypnosis. There are sections on the importance of physical exercise, nutrition, and sleep in reducing stress and on more effective communication and management of time, thought, and job stress. Throughout the book there are instructions and exercises for using the various techniques, and there is a large and varied bibliography on the physical, psychological, and social aspects of stress and relaxation.

As a new tool for use with home computers, Relax is very interesting and unusually well done. The only improvement I can think of is to add meaningful sound biofeedback. There is sound with the Sensoral Kaleidoscope and the Balloon Game, but it doesn't seem to be meaningful. I find it difficult to relax deeply while watching a graph on the screen. The hypnotic kaleidoscope is easier in that regard, but for me the Relax biofeedback would be more useful in learning to relax if I could close my eyes and listen to the biofeedback information. Visualization is a very effective technique for relaxation (the audio cassette asks you to visualize relaxing scenes), but it is difficult to visualize one scene while watching another on the screen.

Relax does provide two different kinds of biofeedback (the Graph and the Kaleidoscope) and many other relaxation methods in the workbook, so you can choose the method(s) most effective for you. Even if you choose one of the methods in the book for learning, you can use the biofeedback to check your progress and to make learning to relax more fun.

Relax is a training program for people under stress who wish to learn how to relax deeply and reduce stress. To use it effectively, most people will require regular practice and perseverance until they can relax at will without the aid of Relax and their general level of stress is reduced. For the self-motivated person who needs a little help getting started in and monitoring progress — or who is interested in biofeedback and computers — Relax is an excellent tool.

— Linda Bumpas

MAZE MAKER

I had quite a few problems with this program including one I was never able to solve. If anyone can figure out what is wrong, I'd appreciate knowing about it. First, about the program

The program generates mazes having only one path through the maze. Any size up to 25X30 can be generated. Once generated the maze can be printed out on a printer, or viewed on the screen. The screen maze can be traversed using a cursor controlled by joystick #1. A third option is to have the maze put on the screen with invisible walls. This makes it quite a bit more difficult to traverse.

Now for the problem. Originally I had the menu return after the maze was run in order to select another option. If the generate new maze option was selected though, the program puts random characters on the screen while generating the maze and locks up. It seems to happen only after I do a runmaze.

In some cases I was able to get the second maze to appear but it displays all messed up with most of the rooms being completely closed off. It was as if calling Graphics 7 in the runmaze portion had made the program completely forget where the array 'maze' was. The only solution I could come up with was to make runmaze lock up in an infinite loop at the end so you have to push RESET to generate a new maze.

— Stan Ockers

HEX FACTS

"Hex Facts" is a flash-card type program which can be used for drilling oneself on simple hexadecimal addition and subtraction problems. You may have used the same method to learn decimal addition and subtraction facts in grammar school.

I was inspired to write this program after I began to realize how much time my feeble mind was wasting by the method it was using to add a couple of hexadecimal digits. That is: Convert the numbers to decimal, add them, then convert the result back to hexadecimal. Now, after using the program a few dozen times, I am beginning to break old habits and starting to think in hexadecimal.

After you have typed in the program, SAVE it, and RUN it. You will be presented with a choice of addition or subtraction. You make your choice by pressing either the A or the S key. Unless you are already somewhat proficient at hexadecimal arithmetic, I suggest starting with addition. It is easier and learning it first will make memorization of the subtraction much easier.

After you have made your choice, you are presented with a problem written in large (graphics mode two) golden numbers. Example: C + 5 = . Pressing any key will cause the correct answer to be printed and also the next problem. These problems are given in a random order until all possible combinations of the digits from 2 to F have been used with the exception of problems where the result is the same as a decimal problem (4 + 5 for example).

After the last problem, you are prompted with the question: "Do it again?". Pressing the Y key will start the program over. Any other response will end the program.

How It Works

Line 230 puts the digits 2 through F into a string and line 240 initializes two arrays with 14 elements each; one for each digit. Lines 320 and 330 shuffle the elements in the arrays. This accounts for the random manner in which the problems are presented. For a full explanation of this shuffle technique, see James E. Korenthal's article "Atari Fast Shuffle" in *Compute! Magazine*: June 83, page 223.

The heart of the program is the loop from lines 340 to 520. One problem is presented on the screen each time through the loop with one exception which is explained below.

In lines 350 to 380, two digits are selected from the DIGITS\$ string and assigned to the variables HEX1\$ and HEX2\$. The decimal values are assigned to the variables DEC1 and DEC2 and their sum determined in line 390. If the sum is nine or less then the problem is skipped since this is, in effect, a simple decimal arithmetic problem.

Lines 400 to 430 convert the sum to hexadecimal form for printing to the screen.

If the problem is to be an addition problem it is printed on the screen in the form of "HEX1\$ + HEX2\$ = ANS\$" by lines 440 and 480. If it is to be a subtraction problem it takes the form "ANS\$ - HEX1\$ = HEX2\$" as directed by lines 450 and 490.

Since you do not have automatic scrolling in graphics mode two, the error trapping routine at lines 580 to 610 clears the screen and allows the printing to resume at the top of the screen whenever a "Cursor Out of Range" error occurs.

— Larry L. Farmer

TREASURE

This is a game where you try to beat your opponent to find the buried treasure. You and your opponent are given clues to follow which point in the general direction of the treasure. Each time you press the fire button a clue will appear.

There are 4 game variations: 1. Treasures are fixed and clues are accurate; 2. Treasures are fixed and clues are false when you are horizontally or vertically in line with the treasure; 3. Treasures move and clues are correct; and, 4. Treasures move and clues are false again.

The first player to collect 10 bags of treasure wins the game.

— Sydney Brown



GLOBAL SEARCH HANDLER

(Search Routine by C. Mueller, see the MARCH '84 ACE.)

Atari BASIC is nice, but if you are de-bugging a big program, searching for a bug can be a pain in the neck. An ideal solution is a FIND command in BASIC. Unfortunately, the people who made BASIC didn't include it. Since inserting a new command into BASIC is impractical, using a device handler solves the problem.

My routine sets up a device called F: into the handler table with routines in page 6 and some in low memory. Just LIST to F: with the string you want to find as the filename. Example:

LIST"F:HELLO" to find the string HELLO.

Note any characters can be used as the filename, inverse, lower-case and graphics characters.

This routine scans for any and all references in the program to the search string. If you are looking for something specific, like the assignment of a single variable, don't just use the variable name, include a few surrounding characters. Example: LIST"F:A" finds all A characters in the program, but LIST"F::A=" lists all assignments of variable A.

Final notes: This routine uses page 6 to \$680, and part of low memory to \$1DD7. If you want to use the DOS menu, be sure to have a MEM.SAV file on disk. SYSTEM RESET won't kill this, so the only way to take it out is to cold start the computer. Have Fun!!

— Greg Menke



VP's RAMBLINGS

The club has a new BBS program called FoReM, and we now have 2 eighty track drives giving us over 1.4 Meg. in mass storage. In next month's newsletter I will give a more complete review of the new program. Since the FoReM board is a password type board all of the members who have modems should sign on so I can raise their level of access. This way members can use that part of the board reserved for only them.

ROYAL SOFTWARE, a local company, is bringing out a new program called TRIVIA QUEST which is just the thing for today with all the people into the trivia type games. I have watched this game grow from conception to where it is now and I think it is really something. It should be in your local software store in October.

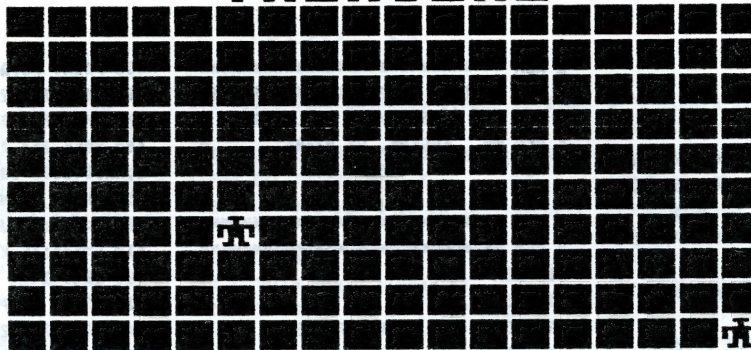
This next year should see many changes and I hope to be able to bring you news of new products, new ideas and good news from Atari.

We are looking for a public domain modem program called KERMIT for the Atari. If anyone has it or knows where we can get it please let us know or just send it along and we will send you something in return.

Until next month, your VP,
— Larry Gold



TREASURE



ACE

SYDNEY BROWN

```
0 GOSUB 32000:OP=1
1 REM *****
2 REM **ATARI COMPUTER ENTHUSIASTS*
3 REM ** 3662 VINE MAPLE DR *
4 REM ** EUGENE, OR 97405 *
5 REM ** SEPT 84 *
6 REM ** $12 YR *
7 REM *****
8 REM *****
9 REM ** TREASURE HUNT *
10 REM * by *
11 REM * Sydney Brown *
12 REM *****
100 POKE 756,224:POSITION 5,1: ? #6;"S
lection 1":POSITION 5,11: ? #6;"press s
tart":GOSUB 110
105 IF PEEK(53279)=5 THEN OP=OP+1:GOSU
B 110
108 IF PEEK(53279)=6 THEN 190
109 FOR M=1 TO 77:NEXT M:GOTO 105
110 IF OP>4 THEN OP=1
111 IF OP=2 OR OP=4 THEN POSITION 2,4:
? #6;"FALSE DIRECTIONS";
112 IF OP=1 OR OP=2 THEN POSITION 1,6:
? #6;"STATIONARY TREASURE";
113 IF OP=3 OR OP=4 THEN POSITION 1,6:
? #6;"MOVING TREASURE ";
114 IF OP=1 OR OP=3 THEN POSITION 2,4:
? #6;"TRUE DIRECTIONS";
115 IF OP=1 OR OP=3 THEN NN=0
116 IF OP=2 OR OP=4 THEN NN=-9
120 POSITION 15,1: ? #6;OP:FOR M=1 TO
123:NEXT M:RETURN
190 ? #6;"K":POKE 756,CB:POKE 708,28:P
OKE 709,224:POKE 710,202:POKE 711,142:
POKE 712,134:GOSUB 1000:M=1:GOSUB 300
195 H1=1:V1=10:H2=18:V2=10:POSITION H1
,V1: ? #6;"v":POSITION H2,V2: ? #6;"v":
ZZ=1:C1=NN:C2=NN:S1=0:S2=0
```

```
200 X=H1:Y=V1:ST=STICK(0):IF ST=14 THE
N LOCATE H1,V1-1,Z:IF Z=209 THEN V1=V1
-1:GOTO 208
202 IF ST=13 THEN LOCATE H1,V1+1,Z:IF
Z=209 THEN V1=V1+1:GOTO 208
204 IF ST=11 THEN LOCATE H1-1,V1,Z:IF
Z=209 THEN H1=H1-1:GOTO 208
206 IF ST=7 THEN LOCATE H1+1,V1,Z:IF Z
=209 THEN H1=H1+1:GOTO 208
208 IF X<H1 OR Y<V1 THEN POSITION X,
Y: ? #6;"v";
209 POSITION H1,V1: ? #6;"v":IF STRIG(
0)=0 THEN C1=C1+1:X=H1:Y=V1:M=1:GOSUB
2000
210 X=H2:Y=V2:ST=STICK(1):IF ST=14 THE
N LOCATE H2,V2-1,Z:IF Z=209 THEN V2=V2
-1:GOTO 218
212 IF ST=13 THEN LOCATE H2,V2+1,Z:IF
Z=209 THEN V2=V2+1:GOTO 218
214 IF ST=11 THEN LOCATE H2-1,V2,Z:IF
Z=209 THEN H2=H2-1:GOTO 218
216 IF ST=7 THEN LOCATE H2+1,V2,Z:IF Z
=209 THEN H2=H2+1:GOTO 218
218 IF X<H2 OR Y<V2 THEN POSITION X,
Y: ? #6;"v";
219 POSITION H2,V2: ? #6;"v":IF STRIG(
1)=0 THEN C2=C2+1:X=H2:Y=V2:M=2:GOSUB
2000
298 FOR M=1 TO 35:NEXT M:ZZ=ZZ+1:IF ZZ
>34 THEN ZZ=1:IF OP=3 OR OP=4 THEN GOS
UB 500:SOUND 0,0,0,0
299 GOTO 200
300 H=INT(10*RNDR(0))+1:V=INT(10*RNDR(0)
)+1:LOCATE H,V,Z:IF Z<209 THEN 300
309 C1=1:C2=1:RETURN
400 FOR M=1 TO 7:POSITION H,V: ? #6;"M"
:SOUND 0,RNDR(0)*10+1,6,10:FOR MM=1 TO
21:NEXT MM:POSITION H,V: ? #6;"v";
405 FOR MM=1 TO 21:NEXT MM:SOUND 0,0,0
```

```
,0:NEXT M:SOUND 0,0,0,0:FOR M=1 TO 49:
NEXT M
410 S1=S1+1:POSITION 0,51: ? #6;"M":FO
R M=15 TO 0 STEP -0.25:SOUND 0,7,10,M:
NEXT M:SOUND 0,0,0,0:IF S1>9 THEN 505
449 GOSUB 300:GOTO 200
450 FOR M=1 TO 7:POSITION H,V: ? #6;"M"
:SOUND 0,RNDR(0)*10+1,6,10:FOR MM=1 TO
21:NEXT MM:POSITION H,V: ? #6;"v";
455 FOR MM=1 TO 21:NEXT MM:SOUND 0,0,0,
0:NEXT M:SOUND 0,0,0,0:FOR M=1 TO 49:
NEXT M
460 S2=S2+1:POSITION 19,52: ? #6;"M":F
OR M=15 TO 0 STEP -0.25:SOUND 0,10,10,
M:NEXT M:SOUND 0,0,0,0:IF S2>9 THEN 50
5
499 GOSUB 300:GOTO 200
500 SOUND 0,77,10,10:R=INT(4*RNDR(0)):P
OSITION 0,0: ? #6;H; " ";V; " ":IF R=0 T
HEN H=H+1:IF H>18 THEN H=1:RETURN
501 IF R=1 THEN H=H-1:IF H<1 THEN H=18
:RETURN
502 IF R=2 THEN V=V-1:IF V<1 THEN V=10
:RETURN
503 IF R=3 THEN V=V+1:IF V>10 THEN V=1
:RETURN
504 RETURN
505 FOR M=1 TO 20:POSITION M-1,11: ? #6
;FIN$(M,M):SOUND 0,RNDR(0)*123+10,10,1
0
509 POKE 710,INT(RNDR(0)*16)*16+8:FOR M
=1 TO 21:NEXT MM:NEXT M:POKE 710,202:
POKE 77,126
510 SOUND 0,0,0,0:FOR M=1 TO 20:POSITI
ON 0,11: ? #6;FIN$(M,M+19):IF PEEK(532
79)=6 THEN 599
520 FOR MM=1 TO 77:NEXT MM:NEXT M:GOTO
510
599 POKE 77,0:POSITION 0,0: ? #6;"K":GO
```




```

TO 100
1000 FOR M=1 TO 10:POSITION 1,M:?" #6;"
00000000000000000000";NEXT M:POSITION 0
,0:?" #6;"v TREASURE 0";
1010 POSITION 7,11:?" #6;" ACE ";:RETRN
M
2000 POKE 77,0:IF K=M AND Y=V THEN ON
M GOTO 400,450
2002 IF M=1 AND C1>11 THEN RETURN
2004 IF M=2 AND C2>11 THEN RETURN
2010 IF H<=X OR V<=Y THEN 2015
2011 POSITION X,Y:?" #6;"0";:GOTO 2100
2015 IF H<=X OR V<=Y THEN 2020
2016 POSITION X,Y:?" #6;"1";:GOTO 2100
2020 IF H<=X OR V<=Y THEN 2025
2021 POSITION X,Y:?" #6;"2";:GOTO 2100
2025 IF H<=X OR V<=Y THEN 2030
2026 POSITION X,Y:?" #6;"3";:GOTO 2100
2030 IF OP=2 OR OP=4 THEN R=INT(4*RND(
0))+1:ON R GOTO 2011,2016,2021,2026
2050 IF H<=X OR V<=Y THEN 2055
2051 POSITION X,Y:?" #6;"4";:GOTO 2100
2055 IF H<=X OR V<=Y THEN 2060
2056 POSITION X,Y:?" #6;"5";:GOTO 2100
2060 IF H<=X OR V<=Y THEN 2065
2061 POSITION X,Y:?" #6;"6";:GOTO 2100
2065 IF H<=X OR V<=Y THEN 2100
2066 POSITION X,Y:?" #6;"7";:GOTO 2100
2100 SOUND 0,10*M,6,8:FOR M=1 TO 35:NE
XT M:SOUND 0,0,0,0:RETURN
2999 RETURN
32000 DIM PR$(50),FINS$(40):CB=PEEK(106
)-4:POKE 106,CB:PR$(1,41)="hh,0h,1h,2h
32010 GRAPHICS 18:Z=CB*256:A=USR(ADR CP
R$),Z,4):FOR M=Z+432 TO Z+511:READ D:P
OKE M,D:NEXT M
32020 FOR M=Z+392 TO Z+399:READ D:POKE
M,D:NEXT M:FINS=" the end push start
the end push start":RETURN
32760 DATA 56,16,254,106,106,40,100,0,
0,12,14,56,124,254,254,124
32761 DATA 16,56,84,146,16,16,16,0,62,
6,10,18,34,64,128,0
32762 DATA 16,8,4,254,4,8,16,0,128,64,
34,18,10,6,62,0
32763 DATA 16,16,16,146,84,56,16,0,2,4
,136,144,160,192,248,0
32764 DATA 16,32,64,254,64,32,16,0,248
,192,160,144,136,4,2,0
32765 DATA 254,254,254,254,254,254,254
,0

```

```

1 REM *****
2 REM **ATARI COMPUTER ENTHUSIAST**
3 REM ** 3662 VINE MAPLE DR *
4 REM ** EUGENE, OR 97405 *
5 REM ** SEPT 84 *
6 REM ** $12 VR *
7 REM *****
8 REM *****
100 REM * * * * *
110 REM * *
120 REM * HEX FACTS *
130 REM * *
140 REM * by *
150 REM * *
160 REM * Larry L Farmer *
170 REM * 387 Fiddlers Green *
180 REM * Dover, DE 19901 *
190 REM * *
200 REM * * * * *
210 GRAPHICS 18:SETCOLOR 4,3,4:TRAP 50
0
220 DIM DIGITS$(14),A(14),B(14),HEX1$(
1),HEX2$(1),ANS$(2)
230 DIGITS$="23456789ABCDEF"
240 FOR I=1 TO 14:A(I)=I:B(I)=I:NEXT I
250 PRINT #6;CHR$(125):POSITION 4,3:PR
INT #6;"addition"
260 POKE 85,4:PRINT #6;"subtraction":P
RINT #6
270 PRINT #6;"which (a or s)?:POKE 76
4,255
280 IF PEEK(764)=255 THEN 280
290 CH=PEEK(764)
300 IF CH)63 OR CH<62 THEN 250
310 PRINT #6;CHR$(125);
320 FOR I=1 TO 14:C=A(I):D=INT(RND(0)*
14+1):A(I)=A(D):A(D)=C
330 C=B(I):D=INT(RND(0)*14+1):B(I)=B(D
):B(D)=C:NEXT I
340 J=1:K=2:FOR I=1 TO 196
350 HEX1$=DIGITS$(A(J)):IF ASC(HEX1$)
57 THEN DEC1=ASC(HEX1$)-55:GOTO 370
360 DEC1=VAL(HEX1$)
370 HEX2$=DIGITS$(B(K)):IF ASC(HEX2$)
57 THEN DEC2=ASC(HEX2$)-55:GOTO 390
380 DEC2=VAL(HEX2$)
390 SUM=DEC1+DEC2:IF SUM<10 THEN 500
400 IF SUM<16 THEN ANS$=" ":SCNDIG=SUM
:GOTO 420
410 ANS$="1":SCNDIG=SUM-16
420 IF SCNDIG<9 THEN ANS$(2,2)=CHR$(S
CNDIG+48):GOTO 440
430 ANS$(2,2)=CHR$(SCNDIG+55)
440 POKE 85,4:IF CH=63 THEN PRINT #6;H
EX1$+" "+HEX2$;" = ";:GOTO 460

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```

450 PRINT #6;ANS$;" - ";HEX1$;" = ";
460 POKE 764,255
470 IF PEEK(764)=255 THEN 470
480 POKE 764,255:IF CH=63 THEN PRINT #
6;ANS$:GOTO 500
490 PRINT #6;HEX2$
500 J=J+1:IF J=15 THEN J=1:K=K+1
510 K=K+1:IF K)=15 THEN K=1
520 NEXT I
530 PRINT #6;PRINT #6;"DO IT AGAIN?"
540 POKE 764,255
550 IF PEEK(764)=255 THEN 550
560 IF PEEK(764)=43 THEN POKE 764,255:
GOTO 250
570 POKE 764,255:END
580 ERR=PEEK(195):IF ERR=141 THEN 600
590 PRINT "ERROR NUMBER ";ERR;" AT LIN
E ";PEEK(186)+256*PEEK(187):END
600 FOR DELAY=1 TO 750:NEXT DELAY
610 PRINT #6;CHR$(125);:TRAP 500:GOTO
440

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dos ii

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":RETURN
10017 ? :? "HOW ABOUT THIS...":GOSUB
800
32000 FOR I=1 TO 350:NEXT I:POKE 65,0:
? "FORMATTING DISK 1";
32002 C$="hh,1h,2h,3h,4h,5h,6h,7h,8h,9h
10h,11h,12h,13h,14h,15h,16h,17h,18h,19h
20h,21h,22h,23h,24h,25h,26h,27h,28h,29h
30h,31h,32h,33h,34h,35h,36h,37h,38h,39h
40h,41h,42h,43h,44h,45h,46h,47h,48h,49h
50h,51h,52h,53h,54h,55h,56h,57h,58h,59h
60h,61h,62h,63h,64h,65h,66h,67h,68h,69h
70h,71h,72h,73h,74h,75h,76h,77h,78h,79h
80h,81h,82h,83h,84h,85h,86h,87h,88h,89h
90h,91h,92h,93h,94h,95h,96h,97h,98h,99h
100h,101h,102h,103h,104h,105h,106h,107h,108h,109h,110h,111h,112h,113h,114h,115h,116h,117h,118h,119h,120h,121h,122h,123h,124h,125h,126h,127h,128h,129h,130h,131h,132h,133h,134h,135h,136h,137h,138h,139h,140h,141h,142h,143h,144h,145h,146h,147h,148h,149h,150h,151h,152h,153h,154h,155h,156h,157h,158h,159h,160h,161h,162h,163h,164h,165h,166h,167h,168h,169h,170h,171h,172h,173h,174h,175h,176h,177h,178h,179h,180h,181h,182h,183h,184h,185h,186h,187h,188h,189h,190h,191h,192h,193h,194h,195h,196h,197h,198h,199h,200h,201h,202h,203h,204h,205h,206h,207h,208h,209h,210h,211h,212h,213h,214h,215h,216h,217h,218h,219h,220h,221h,222h,223h,224h,225h,226h,227h,228h,229h,230h,231h,232h,233h,234h,235h,236h,237h,238h,239h,240h,241h,242h,243h,244h,245h,246h,247h,248h,249h,250h,251h,252h,253h,254h,255h,256h,257h,258h,259h,260h,261h,262h,263h,264h,265h,266h,267h,268h,269h,270h,271h,272h,273h,274h,275h,276h,277h,278h,279h,280h,281h,282h,283h,284h,285h,286h,287h,288h,289h,290h,291h,292h,293h,294h,295h,296h,297h,298h,299h,300h,301h,302h,303h,304h,305h,306h,307h,308h,309h,310h,311h,312h,313h,314h,315h,316h,317h,318h,319h,320h,321h,322h,323h,324h,325h,326h,327h,328h,329h,330h,331h,332h,333h,334h,335h,336h,337h,338h,339h,340h,341h,342h,343h,344h,345h,346h,347h,348h,349h,350h,351h,352h,353h,354h,355h,356h,357h,358h,359h,360h,361h,362h,363h,364h,365h,366h,367h,368h,369h,370h,371h,372h,373h,374h,375h,376h,377h,378h,379h,380h,381h,382h,383h,384h,385h,386h,387h,388h,389h,390h,391h,392h,393h,394h,395h,396h,397h,398h,399h,400h,401h,402h,403h,404h,405h,406h,407h,408h,409h,410h,411h,412h,413h,414h,415h,416h,417h,418h,419h,420h,421h,422h,423h,424h,425h,426h,427h,428h,429h,430h,431h,432h,433h,434h,435h,436h,437h,438h,439h,440h,441h,442h,443h,444h,445h,446h,447h,448h,449h,450h,451h,452h,453h,454h,455h,456h,457h,458h,459h,460h,461h,462h,463h,464h,465h,466h,467h,468h,469h,470h,471h,472h,473h,474h,475h,476h,477h,478h,479h,480h,481h,482h,483h,484h,485h,486h,487h,488h,489h,490h,491h,492h,493h,494h,495h,496h,497h,498h,499h,500h,501h,502h,503h,504h,505h,506h,507h,508h,509h,510h,511h,512h,513h,514h,515h,516h,517h,518h,519h,520h,521h,522h,523h,524h,525h,526h,527h,528h,529h,530h,531h,532h,533h,534h,535h,536h,537h,538h,539h,540h,541h,542h,543h,544h,545h,546h,547h,548h,549h,550h,551h,552h,553h,554h,555h,556h,557h,558h,559h,560h,561h,562h,563h,564h,565h,566h,567h,568h,569h,570h,571h,572h,573h,574h,575h,576h,577h,578h,579h,580h,581h,582h,583h,584h,585h,586h,587h,588h,589h,590h,591h,592h,593h,594h,595h,596h,597h,598h,599h,600h,601h,602h,603h,604h,605h,606h,607h,608h,609h,610h,611h,612h,613h,614h,615h,616h,617h,618h,619h,620h,621h,622h,623h,624h,625h,626h,627h,628h,629h,630h,631h,632h,633h,634h,635h,636h,637h,638h,639h,640h,641h,642h,643h,644h,645h,646h,647h,648h,649h,650h,651h,652h,653h,654h,655h,656h,657h,658h,659h,660h,661h,662h,663h,664h,665h,666h,667h,668h,669h,670h,671h,672h,673h,674h,675h,676h,677h,678h,679h,680h,681h,682h,683h,684h,685h,686h,687h,688h,689h,690h,691h,692h,693h,694h,695h,696h,697h,698h,699h,700h,701h,702h,703h,704h,705h,706h,707h,708h,709h,710h,711h,712h,713h,714h,715h,716h,717h,718h,719h,720h,721h,722h,723h,724h,725h,726h,727h,728h,729h,730h,731h,732h,733h,734h,735h,736h,737h,738h,739h,740h,741h,742h,743h,744h,745h,746h,747h,748h,749h,750h,751h,752h,753h,754h,755h,756h,757h,758h,759h,760h,761h,762h,763h,764h,765h,766h,767h,768h,769h,770h,771h,772h,773h,774h,775h,776h,777h,778h,779h,780h,781h,782h,783h,784h,785h,786h,787h,788h,789h,790h,791h,792h,793h,794h,795h,796h,797h,798h,799h,800h,801h,802h,803h,804h,805h,806h,807h,808h,809h,810h,811h,812h,813h,814h,815h,816h,817h,818h,819h,820h,821h,822h,823h,824h,825h,826h,827h,828h,829h,830h,831h,832h,833h,834h,835h,836h,837h,838h,839h,840h,841h,842h,843h,844h,845h,846h,847h,848h,849h,850h,851h,852h,853h,854h,855h,856h,857h,858h,859h,860h,861h,862h,863h,864h,865h,866h,867h,868h,869h,870h,871h,872h,873h,874h,875h,876h,877h,878h,879h,880h,881h,882h,883h,884h,885h,886h,887h,888h,889h,890h,891h,892h,893h,894h,895h,896h,897h,898h,899h,900h,901h,902h,903h,904h,905h,906h,907h,908h,909h,910h,911h,912h,913h,914h,915h,916h,917h,918h,919h,920h,921h,922h,923h,924h,925h,926h,927h,928h,929h,930h,931h,932h,933h,934h,935h,936h,937h,938h,939h,940h,941h,942h,943h,944h,945h,946h,947h,948h,949h,950h,951h,952h,953h,954h,955h,956h,957h,958h,959h,960h,961h,962h,963h,964h,965h,966h,967h,968h,969h,970h,971h,972h,973h,974h,975h,976h,977h,978h,979h,980h,981h,982h,983h,984h,985h,986h,987h,988h,989h,990h,991h,992h,993h,994h,995h,996h,997h,998h,999h,1000h,1001h,1002h,1003h,1004h,1005h,1006h,1007h,1008h,1009h,1010h,1011h,1012h,1013h,1014h,1015h,1016h,1017h,1018h,1019h,1020h,1021h,1022h,1023h,1024h,1025h,1026h,1027h,1028h,1029h,1030h,1031h,1032h,1033h,1034h,1035h,1036h,1037h,1038h,1039h,1040h,1041h,1042h,1043h,1044h,1045h,1046h,1047h,1048h,1049h,1050h,1051h,1052h,1053h,1054h,1055h,1056h,1057h,1058h,1059h,1060h,1061h,1062h,1063h,1064h,1065h,1066h,1067h,1068h,1069h,1070h,1071h,1072h,1073h,1074h,1075h,1076h,1077h,1078h,1079h,1080h,1081h,1082h,1083h,1084h,1085h,1086h,1087h,1088h,1089h,1090h,1091h,1092h,1093h,1094h,1095h,1096h,1097h,1098h,1099h,1100h,1101h,1102h,1103h,1104h,1105h,1106h,1107h,1108h,1109h,1110h,1111h,1112h,1113h,1114h,1115h,1116h,1117h,1118h,1119h,1120h,1121h,1122h,1123h,1124h,1125h,1126h,1127h,1128h,1129h,1130h,1131h,1132h,1133h,1134h,1135h,1136h,1137h,1138h,1139h,1140h,1141h,1142h,1143h,1144h,1145h,1146h,1147h,1148h,1149h,1150h,1151h,1152h,1153h,1154h,1155h,1156h,1157h,1158h,1159h,1160h,1161h,1162h,1163h,1164h,1165h,1166h,1167h,1168h,1169h,1170h,1171h,1172h,1173h,1174h,1175h,1176h,1177h,1178h,1179h,1180h,1181h,1182h,1183h,1184h,1185h,1186h,1187h,1188h,1189h,1190h,1191h,1192h,1193h,1194h,1195h,1196h,1197h,1198h,1199h,1200h,1201h,1202h,1203h,1204h,1205h,1206h,1207h,1208h,1209h,1210h,1211h,1212h,1213h,1214h,1215h,1216h,1217h,1218h,1219h,1220h,1221h,1222h,1223h,1224h,1225h,1226h,1227h,1228h,1229h,1230h,1231h,1232h,1233h,1234h,1235h,1236h,1237h,1238h,1239h,1240h,1241h,1242h,1243h,1244h,1245h,1246h,1247h,1248h,1249h,1250h,1251h,1252h,1253h,1254h,1255h,1256h,1257h,1258h,1259h,1260h,1261h,1262h,1263h,1264h,1265h,1266h,1267h,1268h,1269h,1270h,1271h,1272h,1273h,1274h,1275h,1276h,1277h,1278h,1279h,1280h,1281h,1282h,1283h,1284h,1285h,1286h,1287h,1288h,1289h,1290h,1291h,1292h,1293h,1294h,1295h,1296h,1297h,1298h,1299h,1300h,1301h,1302h,1303h,1304h,1305h,1306h,1307h,1308h,1309h,1310h,1311h,1312h,1313h,1314h,1315h,1316h,1317h,1318h,1319h,1320h,1321h,1322h,1323h,1324h,1325h,1326h,1327h,1328h,1329h,1330h,1331h,1332h,1333h,1334h,1335h,1336h,1337h,1338h,1339h,1340h,1341h,1342h,1343h,1344h,1345h,1346h,1347h,1348h,1349h,1350h,1351h,1352h,1353h,1354h,1355h,1356h,1357h,1358h,1359h,1360h,1361h,1362h,1363h,1364h,1365h,1366h,1367h,1368h,1369h,1370h,1371h,1372h,1373h,1374h,1375h,1376h,1377h,1378h,1379h,1380h,1381h,1382h,1383h,1384h,1385h,1386h,1387h,1388h,1389h,1390h,1391h,1392h,1393h,1394h,1395h,1396h,1397h,1398h,1399h,1400h,1401h,1402h,1403h,1404h,1405h,1406h,1407h,1408h,1409h,1410h,1411h,1412h,1413h,1414h,1415h,1416h,1417h,1418h,1419h,1420h,1421h,1422h,1423h,1424h,1425h,1426h,1427h,1428h,1429h,1430h,1431h,1432h,1433h,1434h,1435h,1436h,1437h,1438h,1439h,1440h,1441h,1442h,1443h,1444h,1445h,1446h,1447h,1448h,1449h,1450h,1451h,1452h,1453h,1454h,1455h,1456h,1457h,1458h,1459h,1460h,1461h,1462h,1463h,1464h,1465h,1466h,1467h,1468h,1469h,1470h,1471h,1472h,1473h,1474h,1475h,1476h,1477h,1478h,1479h,1480h,1481h,1482h,1483h,1484h,1485h,1486h,1487h,1488h,1489h,1490h,1491h,1492h,1493h,1494h,1495h,1496h,1497h,1498h,1499h,1500h,1501h,1502h,1503h,1504h,1505h,1506h,1507h,1508h,1509h,1510h,1511h,1512h,1513h,1514h,1515h,1516h,1517h,1518h,1519h,1520h,1521h,1522h,1523h,1524h,1525h,1526h,1527h,1528h,1529h,1530h,1531h,1532h,1533h,1534h,1535h,1536h,1537h,1538h,1539h,1540h,1541h,1542h,1543h,1544h,1545h,1546h,1547h,1548h,1549h,1550h,1551h,1552h,1553h,1554h,1555h,1556h,1557h,1558h,1559h,1560h,1561h,1562h,1563h,1564h,1565h,1566h,1567h,1568h,1569h,1570h,1571h,1572h,1573h,1574h,1575h,1576h,1577h,1578h,1579h,1580h,1581h,1582h,1583h,1584h,1585h,1586h,1587h,1588h,1589h,1590h,1591h,1592h,1593h,1594h,1595h,1596h,1597h,1598h,1599h,1600h,1601h,1602h,1603h,1604h,1605h,1606h,1607h,1608h,1609h,1610h,1611h,1612h,1613h,1614h,1615h,1616h,1617h,1618h,1619h,1620h,1621h,1622h,1623h,1624h,1625h,1626h,1627h,1628h,1629h,1630h,1631h,1632h,1633h,1634h,1635h,1636h,1637h,1638h,1639h,1640h,1641h,1642h,1643h,1644h,1645h,1646h,1647h,1648h,1649h,1650h,1651h,1652h,1653h,1654h,1655h,1656h,1657h,1658h,1659h,1660h,1661h,1662h,1663h,1664h,1665h,1666h,1667h,1668h,1669h,1670h,1671h,1672h,1673h,1674h,1675h,1676h,1677h,1678h,1679h,1680h,1681h,1682h,1683h,1684h,1685h,1686h,1687h,1688h,1689h,1690h,1691h,1692h,1693h,1694h,1695h,1696h,1697h,1698h,1699h,1700h,1701h,1702h,1703h,1704h,1705h,1706h,1707h,1708h,1709h,1710h,1711h,1712h,1713h,1714h,1715h,1716h,1717h,1718h,1719h,1720h,1721h,1722h,1723h,1724h,1725h,1726h,1727h,1728h,1729h,1730h,1731h,1732h,1733h,1734h,1735h,1736h,1737h,1738h,1739h,1740h,1741h,1742h,1743h,1744h,1745h,1746h,1747h,1748h,1749h,1750h,1751h,1752h,1753h,1754h,1755h,1756h,1757h,1758h,1759h,1760h,1761h,1762h,1763h,1764h,1765h,1766h,1767h,1768h,1769h,1770h,1771h,1772h,1773h,1774h,1775h,1776h,1777h,1778h,1779h,1780h,1781h,1782h,1783h,1784h,1785h,1786h,1787h,1788h,1789h,1790h,1791h,1792h,1793h,1794h,1795h,1796h,1797h,1798h,1799h,1800h,1801h,1802h,1803h,1804h,1805h,1806h,1807h,1808h,1809h,1810h,1811h,1812h,1813h,1814h,1815h,1816h,1817h,1818h,1819h,1820h,1821h,1822h,1823h,1824h,1825
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dos ii

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5 REM DOS II UPDATE BY PETE FAZIO
7 REM B.A.S.I.C. BULLETIN VOL.II #2
8 REM PROGRAM IN PUBLIC DOMAIN
9 DIM F$(15),E$(100),C$(100):POKE 82,2
10 OPEN #1,4,0,"K":GRAPHICS 0:POKE 58
0,1
100 TRAP 40000:POKE 16,112:POKE 53774,
112:"ADISK OPERATING SYSTEM II VERSI
ON 2.05"
110 ? "COPYRIGHT 1980 ATARI"
120 ? :? "A. DISK DIRECTORY I. FORMAT
DISK"
130 ? "B. RUN CARTRIDGE J. DUPLICATE
DISK"
140 ? "C. COPY FILE K. BINARY SAV
E"
150 ? "D. DELETE FILE(S) L. BINARY LOA
D"
160 ? "E. RENAME FILE M. RUN AT ADD
RESS"
170 ? "F. LOCK FILE N. CREATE MEM
.SAV"
180 ? "G. UNLOCK FILE O. DUPLICATE
FILE"
190 ? "H. WRITE DOS FILES":? :? :?
200 B=0: ? :? "SELECT ITEM OR RETURN FO
R MENU"
210 GET #1,A:IF A=155 THEN RUN
212 ? CHR$(A);:B=A-64
213 GET #1,A: ? :IF A<155 THEN GOTO 29
0
215 IF B<1 THEN B=3
220 GOTO 290+10*B
290 ? "NO SUCH ITEM":GOTO 200
300 ? "DIRECTORY--SEARCH SPEC,LIST FIL
E?"
301 GET #1,A:IF A<155 THEN GOTO 301
302 ? :OPEN #3,4,0,"D:DOSSYS.BAS":CLOS
E #3
304 ? " THIS FUNCTION":? " AVAILABLE
TO":? " USERS WITH VALID":? " PASSW
ORDS ONLY!"
305 ? :GOTO 200
306 GET #1,A:IF A=155 THEN GOTO 100
307 ? CHR$(A);:GOTO 306
310 ? "K":? "READY":RESTORE 2000
311 GET #1,A:IF A=ASC("E") THEN GOTO 1
00
312 TRAP 100:READ E$: ? E$:GOTO 311
314 GOTO 100
320 ? "GOTCHA! YOU DIRTY PIRATE! THOUGH
T YOU COULD STEAL OUR PROGRAMS,HUH? W
ELL,"
325 ? "YOUR COMPUTER HAS JUST NOTIFIED
THE F.B.I.!!! HA HA!!!":GOTO 200

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330 GOSUB 5000:GRAPHICS 0:POKE 82,2:GO
TO 100
340 OPEN #3,4,0,"D:DOSSYS.BAS":CLOSE #
3:FOR I=1 TO 200:NEXT I
342 ? :? "You can't go in that directi
on."
345 GOTO 200
350 ? "WITH WHAT":INPUT E$
352 ? "I DON'T SEE A ";E$;" HERE!":? :
? "NOW WHAT":E$="":INPUT E$
354 IF E$="" THEN GOTO 100
355 ? :? "I DON'T KNOW HOW TO ";E$;"!":
GOTO 200
360 ? :? "You can't do that...YET!":GO
TO 200
370 CLOSE #3:OPEN #3,4,0,"D:DOSSYS.BAS
":CLOSE #3:GOSUB 3000
375 ? :? "A":GET #1,A
377 ? :? "Oops, wrong DOS!":GOSUB 800
378 GRAPHICS 0:GOTO 100
380 ? "K":POKE 752,1:SETCOLOR 2,0,0: ?
"YOU ARE CARRYING THE FOLLOWING":GOSU
B 800: ?
383 ? " Rusted Sword":? " Empty Glas
s Bottle":? " Flint and Steel":? " *
*GOLDEN IDOL*":? " Brass Key"
385 GOSUB 800: ? :? :? "A" PRESS
RETURN TO CONTINUE"
386 GET #1,A:IF A=155 THEN POKE 752,0:
GRAPHICS 0:GOTO 100
387 GOTO 386
390 ? "K":SETCOLOR 2,3,2: ? "
F.B.I. WARNING"
392 ? :? " The copying of copyright
ed soft- ware is a violation of Feder
al Law "
394 ? "punishable by fines of $250 to
$10,000and/or imprisonment of one to t
en years per violation."
396 ? :? " Therefore, in order to p
revent willful use of this software
to "
397 ? "commit criminal acts, this func
tion has been eliminated on this and
all"
398 ? "future versions of this softwar
e program.
-ATARI Inc. & your FBI
"
399 ? :? :? " PRESS ANY KEY TO CON
TINUE": ? : ? GET #1,A:RUN
400 ? "NOW, LET'S SEE...SHOULD I SAVE
YOUR":? "DISK OR NOT?".
402 GOSUB 800: ? "I COULD BE NICE, AND.
..":GOSUB 800: ? "NAAH, THIS IS MORE FU

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N!": ? :GOTO 32000
410 LIST 32000,32030
411 GOSUB 800
412 GOTO 100
420 A=0:GOSUB 10000:FOR I=1 TO 65
421 IF (I/2)=INT(I/2) THEN POKE 755,6:
GOTO 423
422 POKE 755,2
423 IF (I/3)=INT(I/3) THEN POKE 623,A:
POKE 704,148:POKE 712,148:GOTO 427
425 POKE 623,0:POKE 712,0:SETCOLOR 2,I
NT(RND(0)*15),6
427 REM
428 POKE 53279,0:FOR J=1 TO 10:NEXT J:
A=A+64:IF A>192 THEN A=64
429 NEXT I:POKE 755,2:POKE 623,0:GRAPH
ICS 18:POKE 16,112:POKE 53774,112:POSIT
ION 3,4: ? #6:"THAT WAS YOU!":GOSUB 80
0:RUN
430 GOSUB 999: ? "MY MEMORY IS NOW SAVE
D ON DISK 1. (THANKS, I'VE BEEN GE
TTING VERY "
435 ? "FORGETFUL LATELY.) NOW LET'S SE
E... WHAT AM I SUPPOSED TO PRINT NEX
T..."
436 FOR K=0 TO 750:NEXT K: ? "OH YEAH..
":GOTO 200
438 GET #1,A:IF A<155 THEN GOTO 438
439 GOTO 100
440 ? "NAME OF FILE TO DUPLICATE":IMP
UT E$
441 ? :? "SEARCHING...":CLOSE #3:OPEN
#3,4,0,"D:DOSSYS.BAS":CLOSE #3
442 ? :? "FOUND IT!":GOSUB 800
443 ? :? "YOU CALL THAT A FILE?":GOSUB
800
444 ? :? "IT'S NOT WORTH KEEPING, LET
ALONE DUPLICATING!":GOSUB 800
445 ? :? "THINK I'LL ERASE IT INSTEAD.
..":CLOSE #3:OPEN #3,4,0,"D:DOSSYS.BAS
":CLOSE #3
446 ? :? "GONE!":GOSUB 800
447 GOTO 100
500 GOTO 500
800 FOR I=1 TO 400:NEXT I:RETURN
900 GET #1,A:IF A=155 THEN ? :RETURN
910 ? CHR$(A);:GOTO 900
999 TRAP 1020:OPEN #3,8,0,"D1:MEMS.SAV
":FOR I=1 TO 44: ? #3:"THIS IS A FILE T
O SAVE MEMORY."
1000 ? #3:"I AM YOUR COMPUTER, AND A C
OMPUTER NEVER FORGETS!"
1010 ? #3:"SO ASK ME ANYTHING...EXCEPT
WHAT THIS MEANS." :NEXT I:CLOSE #3:RET
URN

```



MAZE MAKER

STAN OCKERS

```

; MAZE MAKER
; Stan Ockers 8-84
; ACE Newsletter, 3662 Vine Maple Dr.
; Eugene, OR 97405 Sept 84 $12 year
;
; See Creative Computing Dec. '83 p294
; 'Polymaze Solver' by Dan Rollins
;
MODULE
INT
hsiz,vsiz,x,y,j,k,q,d,dir,nd
CARD
room,rwcnt,totrm
BYTE ARRAY
t(6),maze(1000),prev(1000),pwr2=[1 2
4 8]
INT ARRAY
dely(4),delx(4)
BYTE consol=53279,key=764

PROC Init()
FOR j=0 TO 3 DO dely(j)=0 delx(j)=0
  DO dely(0)=-1 dely(2)=1 delx(1)=1
  delx(3)=-1
RETURN

PROC Menu()
BYTE POINTER bptr
CARD dlst
Graphics(2) Poke(710,0) dlst=Peek(560)
dlst==+256*Peek(561) Poke(752,1)
FOR j=0 TO 12 STEP 2 DO bptr=dlst+j
  bptr^=6 OD
Position(6,0) PrintDE(6,"MAZE maker")
PrintDE(6)
PrintDE(6," 1-create new maze")
PrintDE(6)
PrintDE(6," 2-maze to screen")
PrintDE(6)
PrintDE(6," 3-maze to printer")
PrintDE(6)
PrintDE(6," 4-invisible maze")
PrintDE(6)
PrintD(6,"option-BACK TO MENU")
Poke(657,5)
Print("Written in ACTION! (c) 1983 ACS")
RETURN

PROC Cknxt()
IF y>0 THEN IF maze(room-hsiz-1)=0 THEN
  q=q+1:t(q)=0 FI FI
IF x<hsiz THEN IF maze(room+1)=0 THEN
  q=q+1:t(q)=1 FI FI
IF y<vsiz THEN IF maze(room+hsiz+1)=0
  THEN q=q+1:t(q)=2 FI FI
IF x>0 THEN IF maze(room-1)=0 THEN
  q=q+1:t(q)=3 FI FI
RETURN

```

```

PROC Genmaze()
Open(2,"K:",4,0)
Graphics(10) Position(1,3)
PrintDE(6," MAXIMUM size")
PrintDE(6," for screen display")
PrintDE(6," is 25 X 30") PrintDE(6,"")
PrintD(6,"HORIZONTAL SIZE ")
hsiz=InputBD(2) PrintBD(6,hsiz)
PrintD(6,"VERTICAL SIZE ")
vsiz=InputBD(2) PrintBD(6,vsiz)
hsiz=-1 vsiz=-1
FOR room=0 TO 999 DO maze(room)=0 OD
x=Rand(hsiz) y=Rand(vsiz) rwcnt=0
totrm=(hsiz+1)*(vsiz+1)-1
WHILE rwcnt<totrm DO
  q=0 room=y*(hsiz+1)+x Cknxt()
  IF q=0 THEN DO DO
    y=y+1:IF y>vsiz THEN y=0
    x=x+1:IF x>hsiz THEN x=0 FI FI
    room=y*(hsiz+1)+x
  UNTIL maze(room)=0 OD q=0 Cknxt()
  UNTIL q>0 OD FI
  d=Rand(4)+1 dir=t(d)
  maze(room)=+pwr2(dir)
  y=y+dely(dir) x=x+delx(dir)
  room=y*(hsiz+1)+x
  nd=dir-2 IF nd<0 THEN nd==+4 FI
  maze(room)=+pwr2(nd) rwcnt==+1
  OD
  maze(0)=X1
RETURN

PROC Prtmaze()
Open(1,"P:",8,0)
FOR y=0 TO vsiz DO
  FOR x=0 TO hsiz DO room=y*(hsiz+1)+x
    IF maze(room)&1=1 THEN PrintD(1,"+ ")
    ELSE PrintD(1,"+---") FI OD PrintDE(1,"+ ")
  FOR x=0 TO hsiz DO room=y*(hsiz+1)+x
    IF maze(room)>7 THEN PrintD(1," ")
    ELSE PrintD(1,"I ") FI OD PrintDE(1,"I ")
  OD
  FOR x=0 TO hsiz-1 DO PrintD(1,"+---") OD
  PrintDE(1,"+ ")
RETURN

PROC Ding(BYTE pitch)
CARD wait
BYTE loud
FOR loud=0 TO 15
  DO Sound(0,pitch,10,15-loud)
  FOR wait=1 TO 600 DO OD OD SndRst()
RETURN

PROC Ras()
CARD wait
Sound(0,100,12,10)
FOR wait=1 TO 3000 DO OD SndRst()
RETURN

```

```

PROC Square(BYTE colr)
color=colr Plot(j,k) DrawTo(j+3,k)
Plot(j,k+1) DrawTo(j+3,k+1)
RETURN

PROC Plotmaze()
Graphics(23) For y=0 TO vsiz DO
  FOR x=0 TO hsiz DO room=y*(hsiz+1)+x
    j=6*x+4 k=3*y+4
    IF maze(room)&1=0 THEN color=1
    Plot(j,k) DrawTo(j+7,k) FI
    IF maze(room)<8 THEN color=1
    Plot(j,k) DrawTo(j,k+3)
    Plot(j+1,k) DrawTo(j+1,k+3) FI OD
    j=6*x+4 color=1 plot(j,k) DrawTo(j,k+7)
    Plot(j+1,k) DrawTo(j+1,k+3) OD
    k=3*y+4 Plot(4,k) DrawTo(j-5,k)
  RETURN

PROC Runmaze()
color=2 Plot(6,4) DrawTo(9,4)
x=0 y=0 j=6 k=5
FOR room=0 TO 999 DO prev(room)=0 OD
maze(0)=&14 room=0
DO
  q=maze(room) d=5tick(8) prev(room)=1
  Square(2)
  IF d=14 THEN IF (q&1)=1 THEN Ding(50)
  IF prev(room-hsiz-1)=1 THEN Square(3)
  prev(room)=0 FI plot(j,k-1)
  DrawTo(j+3,k-1) y=-1 ELSE Ras() FI FI
  IF d=7 THEN IF (q&2)=2 THEN Ding(60)
  IF prev(room+1)=1 THEN Square(3)
  prev(room)=0 FI plot(j+4,k)
  DrawTo(j+5,k) plot(j+4,k+1)
  DrawTo(j+5,k+1) x=-1 ELSE Ras() FI FI
  IF d=13 THEN IF (q&4)=4 THEN Ding(70)
  IF prev(room+hsiz+1)=1 THEN Square(3)
  prev(room)=0 FI plot(j,k+2)
  DrawTo(j+3,k+2) y=-1 ELSE Ras() FI FI
  IF d=11 THEN IF (q&8)=8 THEN Ding(80)
  IF prev(room-1)=1 THEN Square(3)
  prev(room)=0 FI plot(j-2,k)
  DrawTo(j-1,k) plot(j-2,k+1)
  DrawTo(j-1,k+1) x=-1 ELSE Ras() FI FI
  j=6*x+6 k=3*y+5 room=y*(hsiz+1)+x
  FOR dely=1 TO 3000 DO OD Square(0)
  FOR dely=1 TO 3000 DO OD
; originally I had the following line:
; IF consol=3 THEN maze(0)=X1 EXIT FI
UNTIL room=(hsiz+1)*(vsiz+1)-1
  OD maze(0)=X1
; An endless loop to prevent going
; back to menu - must RESET to play
; again - see text for reason
Square(2) DO FOR j=0 TO 15 DO
  Poke(709,47+j) FOR k=1 TO 1000 DO OD
  OD OD
RETURN

```



```

PROC Main()
Init() Menu() DO
  IF key=31 THEN key=255 Genmaze() Menu()
  Poke(656,2) Poke(657,9) PrintB(hsiz+1)
  Print(" by ") PrintB(vsiz+1)
  Print(" Maze ready") FI
  IF key=30 THEN key=255 Plotmaze()
  Runmaze() Menu() FI
  IF key=26 THEN key=255 Prtmaze()
  Menu() FI
  IF key=24 THEN key=255 Graphics(23)
  color=1 Plot(10,4) j=6*(hsiz+1)+4
  k=3*(vsiz+1)+4 DrawTo(j,4)
  DrawTo(j,k) Plot(j+1,4)
  DrawTo(j+1,k) Plot(5,4) DrawTo(5,k)
  DrawTo(j-5,k) Plot(4,4) DrawTo(4,k)
  Runmaze() Menu() FI
OD
RETURN

```

CASSETTE MENU

SEE JULY/AUG ISSUE

```

0 REM COS BY JAY TORRES
1 POKE 710,128:POKE 712,128:POKE 762,1
:DIM A$(40),B$(128),C$(30)
2 PRINT CHR$(125);"MINI-CASSETTE OPERA
TING SYSTEM":PRINT"ENTER PROGRAM NAME:
";:INPUT A$
3 POKE 710,32:POKE 712,32:PRINT CHR$(1
25);"SEARCHING FOR: ";A$:POKE 764,45:O
PEN #1,4,0,"C:
4 TRAP 5:INPUT #1,B$:C$=B$(7,LEN(B$)):
IF B$(7,6+LEN(A$))=A$ THEN 6
5 GOTO 11
6 TRAP 7:INPUT #1,B$
7 FOR X=1 TO 25:PRINT CHR$(125):NEXT X
:POKE 710,16:POKE 712,16:PRINT CHR$(12
5);"PROGRAM FOUND - ":PRINT A$
8 PRINT"IF THIS PROGRAM IS IN MACHINE
CODE WITH (C:FILENAME.OBJ) SPECIFIE
D YOU
9 PRINT"MUST TURN OFF THE CONSOLE AND
TURN ITSPower ON AGAIN WHILE HOLDING T
HE STARTBUTTON DOWN":FOR W=1 TO 2000:W
EXT W
10 CLOSE #1:FOR X=1 TO 25:PRINT CHR$(1
25):NEXT X:PRINT CHR$(125);"PROGRAM NO
W LOADING: ";A$:POKE 764,45:RUN "C:
11 POKE 710,66:POKE 712,66:PRINT CHR$(
125):PRINT CHR$(125):PRINT CHR$(125);"
PROGRAM NOT FOUND":TRAP 12:INPUT #1,B$
12 CLOSE #1:PRINT:PRINT"ADVANCING TAPE
TO NEXT PROGRAM -":PRINT:PRINT"THIS W
A5: ";C$:POKE 764,45:OPEN #1,4,128,"C:
":TRAP 14
13 INPUT #1,B$:GOTO 13
14 IF PEEK(63) <> 0 THEN CLOSE #1:GOTO 3
15 TRAP 14:GOTO 13

```

```

0 GR.0:POKE 559,0:POKE 752,1:POKE 710,
128:POKE 712,128:POKE 65,0
1 PRINT" YOUR NAME HERE
|
2 PRINT" CASSETTE PROGRAM DIREC
TORY
|
3 PRINT"-----
|
4 PRINT"|A N
|
5 PRINT"|B O
|
6 PRINT"|C P
|
7 PRINT"|D Q
|
8 PRINT"|E R
|
9 PRINT"|F S
|
10 PRINT"|G T
|
11 PRINT"|H U
|
12 PRINT"|I V
|
13 PRINT"|J W
|
14 PRINT"|K X
|
15 PRINT"|L Y
|
16 PRINT"|M Z
|
20 PRINT"-----
|
21 PRINT"| RUN THE COS PROGRAM AND ENT
ER THE
|
22 PRINT"| NAME OF THE PROGRAM YOU WAN
T TO USE
|
23 PRINT"| AS IT IS INDICATED ON THE M
ENU LIST
|
24 PRINT"-----
|
25 PRINT"| PRESS RETURN WHEN YOU ARE
READY
|
28 PRINT"-----
|
29 POKE 559,34
30 OPEN #1,4,0,"K:
31 GET #1,X
32 IF X<155 THEN 31
33 POKE 764,45:RUN "C:

```


FIND ROUTINE

```

2 REM **ATARI COMPUTER ENTHUSIASTS*
3 REM ** 3662 VINE MAPLE DR *
4 REM ** EUGENE, OR 97405 *
5 REM ** SEPT 84 *
6 REM ** $12 YR *
7 REM *****
8 REM *****
9 REM ** GREG MENKE FIND ROUTINE **
10 REM * BASIC LISTING **
11 REM *****
1000 GRAPHICS 0:SETCOLOR 2,0,0:"Writ
ing D:AUTORUN.SYS"
1010 OPEN #1,0,0,"D:AUTORUN.SYS"
1020 READ A:IF A<>-1 THEN PUT #1,A:GOT
0 1020
1030 CLOSE #1:"CHR$(125);"D:AUTORUN.S
YS complete!":END
1040 DATA 255,255,252,28,215,29,24,189
,68,3,105,2,133,36,189
1050 DATA 69,3,105,0,133,53,169,0,141,
109,6,141,110,6,141
1060 DATA 115,6,172,109,6,177,36,201,1
55,240,9,238,109,6,153
1070 DATA 192,3,76,22,29,76,123,6,172,
110,6,153,253,3,201
1080 DATA 155,240,6,238,110,6,76,123,6
,160,0,169,3,133,204
1090 DATA 169,253,133,203,24,173,110,6
,101,203,141,113,6,169,0
1100 DATA 101,204,141,114,6,169,3,133,
206,169,192,133,205,173,109
1110 DATA 6,141,116,6,169,0,160,141,11
1,6,141,112,6,160,0
1120 DATA 238,111,6,208,3,238,112,6,17
7,203,209,205,208,8,200
1130 DATA 204,116,6,240,47,208,242,165
,204,205,114,6,208,7,165
1140 DATA 203,205,113,6,240,8,230,203,
208,214,230,204,208,210,169
1150 DATA 0,141,111,6,141,112,6,32,160
,29,76,123,6,169,0
1160 DATA 141,110,6,141,115,6,96,32,16
8,29,172,115,6,238,115
1170 DATA 6,185,253,3,201,155,240,6,32
,210,29,76,180,29,169
1180 DATA 155,32,210,29,32,168,29,76,1
23,6,108,118,6,240,47
1190 DATA 208,0,6,128,6,24,173,6,228,1
05,1,141,118,6,173
1200 DATA 7,228,105,0,141,119,6,165,12
,141,57,6,165,13,141
1210 DATA 58,6,169,215,141,231,2,169,2
9,141,232,2,32,41,6
1220 DATA 96,169,53,133,12,169,6,133,1
3,32,59,6,96,32,41

```

```

1230 DATA 6,76,56,6,162,0,189,26,3,201
,0,240,10,201,70
1240 DATA 240,6,232,232,232,76,61,6,16
9,70,157,26,3,169,94
1250 DATA 157,27,3,169,6,157,28,3,96,2
51,28,122,6,119,6
1260 DATA 42,29,119,6,119,6,76,58,6,0,
0,0,0,0
1270 DATA 0,0,0,0,160,146,96,160,1,9
6,0,0,0,224
1280 DATA 2,225,2,0,6
1300 DATA -1

```

```

10 ;Global Search device handler.
20 ;
30 ;By Greg Menke, 6/19/84
40 ;
50 ;
60 ;
70 ;Search routine by C. Mueller
80 ;
90 ;(see the March 1984 ACE)
0100 ;
0110 ;
0120 ;
0130 ;
0140 DEVICE = 'F
0150 ;
0160 ICBAL = $344
0170 ICBAN = $345
0180 ICBALZ = $24
0190 ICBANZ = $35
0200 ;
0210 ;
0220 *=$600
0230 ;
0240 CLC
0250 LDA $E406
0260 ADC #1
0270 STA VECTOR
0280 LDA $E407
0290 ADC #0
0300 STA VECTOR+1
0310 LDA 12
0320 STA WEDGE+1
0330 LDA 13
0340 STA WEDGE+2
0350 LDA #END&255
0360 STA 743
0370 LDA #END/256
0380 STA 744
0390 JSR SETUP
0400 RTS

```

GREG MENKE

```

0410 ;
0420 SETUP LDA #RESET&255
0430 STA 12
0440 LDA #RESET/256
0450 STA 13
0460 JSR START
0470 RTS
0480 ;
0490 RESET JSR SETUP
0500 WEDGE JMP WEDGE
0510 ;
0520 START LDH #0
0530 FIND LDA $31A,X
0540 CMP #0
0550 BEQ INIT
0560 CMP #DEVICE
0570 BEQ INIT
0580 INX
0590 INX
0600 INX
0610 JMP FIND
0620 ;
0630 INIT LDA #DEVICE
0640 STA $31A,X
0650 LDA #TABLE&255
0660 STA $31B,X
0670 LDA #TABLE/256
0680 STA $31C,X
0690 RTS
0700 ;
0710 TABLE .WORD OPEN-1
0720 .WORD NOERR-1
0730 .WORD NOFUNC-1
0740 .WORD WRITE-1
0750 .WORD NOFUNC-1
0760 .WORD NOFUNC-1
0770 JMP START-1
0780 ;
0790 INDEX1 .BYTE 0
0800 INDEX2 .BYTE 0
0810 POSIT .BYTE 0,0
0820 ENDTOT .BYTE 0,0
0830 COUNT .BYTE 0
0840 ADTOT = $CB
0850 AD55 = $CD
0860 LEN55 .BYTE 0,0
0870 BUFFER = 960
0880 LINBUFF = 1021
0890 VECTOR .BYTE 0,0
0900 ;
0910 NOFUNC LDY #146
0920 RTS
0930 NOERR LDY #1
0940 RTS
0950 ;
0960 *=$1CFC
0970 ;
0980 OPEN CLC
0990 LDA ICBAL,X
1000 ADC #2

```



```

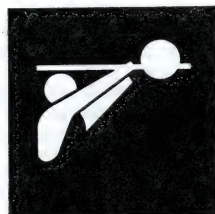
1010 STA ICBALZ
1020 LDA ICBAN,X
1030 ADC #0
1040 STA ICBANZ
1050 LDA #0
1060 STA INDEX1
1070 STA INDEX2
1080 STA COUNT
1090 LOOP LDY INDEX1
1100 LDA (ICBALZ),Y
1110 CMP #155
1120 BEQ DONE
1130 INC INDEX1
1140 STA BUFFER,Y
1150 JMP LOOP
1160 DONE JMP NOERR
1170 ;
1180 ;
1190 WRITE LDY INDEX2
1200 STA LINBUFF,Y
1210 CMP #155
1220 BEQ COMPARE
1230 INC INDEX2
1240 JMP NOERR
1250 COMPARE LDY #0
1260 LDA #LINBUFF/256
1270 STA ADTOT+1
1280 LDA #LINBUFF&255
1290 STA ADTOT
1300 CLC
1310 LDA INDEX2
1320 ADC ADTOT
1330 STA ENDTOT
1340 LDA #0
1350 ADC ADTOT+1
1360 STA ENDTOT+1
1370 LDA #BUFFER/256
1380 STA AD55+1
1390 LDA #BUFFER&255
1400 STA AD55
1410 LDA INDEX1
1420 STA LEN55
1430 LDA #0
1440 TAY
1450 STA POSIT
1460 STA POSIT+1
1470 NEXTCH LDY #0
1480 INC POSIT
1490 BNE CHECKCH
1500 INC POSIT+1
1510 CHECKCH LDA (ADTOT),Y
1520 CMP (AD55),Y
1530 BNE NOMATCH
1540 INY
1550 CPY LEN55

```

```

1560 BEQ FOUND
1570 BNE CHECKCH
1580 NOMATCH LDA ADTOT+1
1590 CMP ENDTOT+1
1600 BNE INC
1610 LDA ADTOT
1620 CMP ENDTOT
1630 BEQ NOFIND
1640 INC INC ADTOT
1650 BNE NEXTCH
1660 INC ADTOT+1
1670 BNE NEXTCH
1680 NOFIND LDA #0
1690 STA POSIT
1700 STA POSIT+1
1710 JSR RESETVAR
1720 JMP NOERR
1730 ;
1740 RESETVAR LDA #0
1750 STA INDEX2
1760 STA COUNT
1770 RTS
1780 ;
1790 FOUND JSR RESETVAR
1800 PRINT LDY COUNT
1810 INC COUNT
1820 LDA LINBUFF,Y
1830 CMP #155
1840 BEQ DONE2
1850 JSR PRINTCHR
1860 JMP PRINT
1870 DONE2 LDA #155
1880 JSR PRINTCHR
1890 JSR RESETVAR
1900 JMP NOERR
1910 ;
1920 PRINTCHR JMP (VECTOR)
1930 ;
1940 END = #2

```



dos ii

```

1020 TRAP 40000:CLOSE #3:RETURN
2000 DATA M,e, ,h,a,v,e, ,t,a,k,e,n, ,
C,o,n,t,r,o,l, ,o,f, ,y,o,u,r, ,C,o,m,
p,u,t,e,r
2001 DATA We ,can ,do ,anything ,we ,w
ant ,with ,it,....
2002 DATA ++++++
2003 DATA We, now, return, control, to
, you
2004 DATA ++++++
3000 ? "K":SETCOLOR 2,12,0:SETCOLOR 4,
12,0:? "Recs Bytes Ext Acc"
3001 ? " 64      8k      1 R/W A:ASM.COM
"
3002 ? " 96     12k      1 R/W A:BIOS.AS
M"
3003 ? " 69      9k      1 R/W A:CBIO5.A
5M"
3004 ? " 22      3k      1 R/W A:FORMAT.
COM"
3005 ? " 24      3k      1 R/W A:SYSGEN.
COM"
3006 ? " 38      5k      1 R/W A:DDT.COM
"
3007 ? " 58      8k      1 R/W A:DISKDEF
.COM"
3008 ? " 56      7k      1 R/W A:DISKMON
.COM"
3009 ? " 52      7k      1 R/W A:ED.COM"
3010 ? " 14      2k      1 R/W A:LOAD.CO
M"
3011 ? " 78     10k      1 R/W A:MOVCPM.
COM"
3012 ? " 58      8k      1 R/W A:PIP.COM
"
3013 ? " 32      4k      1 R/W A:READ-ME
.DOC"
3014 ? " 10      2k      1 R/W A:SUBMIT.
COM"
3015 ? " 6       1k      1 R/W A:XSUB.CO
M"
3016 ? "Bytes Remaining On A: 126k"
3017 RETURN
5000 POKE 82,0:? "K":SETCOLOR 2,9,2:E$
="
Atari Download Files
":FOR I=1 TO LEN(E$):? E$(I,I);NE
XT I
5001 E$="=====
":FOR I=1 TO LEN(E$):? E$(
I,I);:NEXT I
5002 E$="
":FOR I=1 TO LEN(E$):? E$(
I,I);:NEXT I
5003 E$=" 1. AMODEM 4.2 (Basic)

```




```

;*****
;
; ACTOMAC RENUMBERING ROUTINE ;
; WRITTEN BY ERIC KNOPP ;
; FOR MPP 6/17/84 ;
;*****
; THIS PROGRAM WILL TAKE ACTION! ;
; EDITED FILES AND REPLACE OR ADD ;
; LINE NUMBERS.
; IT IS BASIC AND MAC65 COMPATIBLE. ;

```

```
PROC CIO=$E456 (BYTE AREG,XREG)
```

```
PROC READ2()
```

```

;
;   DEFINE BUFLN="100"
;
;   BYTE ARRAY FILE1(16),
;       FILE2(16),
;       BUFFER(BUFLN)=$8005
;
;   BYTE POINTER STORE,
;       STORE1
;   BYTE
;       TEMP,
;       END=$FF,
;       DELCOUNT,
;       LOOP
;
;   BYTE   IOC82CMD=$362,
;   CARD   IOC83CMD=$372
;           IOC82BUF=$364,
;           IOC82LEN=$368,
;           IOC83BUF=$374,
;           IOC83LEN=$378
;

```

```

;   PUTE()
;   PRINT("SOURCE FILE- ")
;   INPUTS(FILE1)
;   PRINT("DESTINATION FILE- ")
;   INPUTS(FILE2)
;   OPEN(2,FILE1,4,0)
;   OPEN(3,FILE2,8,0)
;   STORE=$8000
;   FOR LOOP=1 TO 5
;
;   DO
;       STORE^=$30
;       STORE==+1
;   OD

```

```

STORE==2
STORE^==+1
DO
    IOC82CMD=5 ; 1 TEXTLINE
    IOC82LEN=$FF ; SET TO LOAD
    IOC82BUF=BUFFER
    CIO(0,$20) ; DISK ACCESS
    [$84 $FF]
    DELCOUNT=0
    STORE=$8005
DO
    TEMP=STORE^
    IF (TEMP >$2F) AND (TEMP <$3A) THEN
        DELCOUNT==+1
    FI
    STORE==+1
    UNTIL (TEMP<$30)OR(TEMP>$39)
OD
IF DELCOUNT=0 THEN
    STORE=$8005
    STORE1=STORE+DELCOUNT
    FOR LOOP=(DELCOUNT+$5) TO 254
DO
    STORE^=STORE1^
    STORE==+1
    STORE1==+1
OD
FI
    IOC83CMD=9 ; READY TO
    IOC83LEN=$FF ; WRITE
    IOC83BUF=$8000
    CIO(0,$30) ; DISK ACCESS
    STORE=$8003
    STORE^==+1
    FOR LOOP= 1 TO 4
DO
    IF STORE^=$3A THEN
        STORE^=$30
        STORE==+1
        STORE^==+1
    FI
OD
    UNTIL (END=3) OR (END=88)
OD
    CLOSE(2)
    CLOSE(3)
RETURN

```

dos ii

```

";FOR I=1 TO LEN(E$):? E$(I
,I);:NEXT I
5004 E$=" 2. AMODEM Documentation
";FOR I=1 TO LEN(E$):? E$(I
,I);:NEXT I
5005 E$=" 3. DISKINIT (Basic-from B.
A.5.I.C.) ";FOR I=1 TO LEN(E$):? E$(I
,I);:NEXT I
5006 E$=" 4. BLACK HOLE (M/L-from B.
A.5.I.C.) ";FOR I=1 TO LEN(E$):? E$(I
,I);:NEXT I
5007 E$=" 5. TINY TEXT (Basic-from A
.C.E.) ";FOR I=1 TO LEN(E$):? E$(I
,I);:NEXT I
5008 E$=" 6. TINY TEXT Documentation
";FOR I=1 TO LEN(E$):? E$(I
,I);:NEXT I
5009 E$=" 7. FROGGIE (M/L)
";FOR I=1 TO LEN(E$):? E$(I
,I);:NEXT I
5010 E$=" 8. ULTIMATE LABELER (Basic
) ";FOR I=1 TO LEN(E$):? E$(I
,I);:NEXT I
5011 E$="
";FOR I=1 TO LEN(E$):? E$(I
,I);:NEXT I
5012 E$="Type the number of your choic
e or ";FOR I=1 TO LEN(E$):? E$(I
,I);:NEXT I
5013 E$="(C/R) to exit. )";FOR I=1 TO
LEN(E$):? E$(I,I);:NEXT I
5014 GET #1,A:IF A=155 THEN RETURN
5015 ? CHR$(A)
5016 E$="
";FOR I=1 TO LEN(E$):? E$(I
,I);:NEXT I:GOSUB 800
5017 E$="You must have a valid passwor
d to access";FOR I=1 TO LEN(E$):? E$(I
,I);:NEXT I
5018 E$="this function.
";FOR I=1 TO LEN(E$):? E$(I
,I);:NEXT I
5019 E$="
";FOR I=1 TO LEN(E$):? E$(I
,I);:NEXT I
5020 E$="Type (C/R) to return to Main
Menu: ";FOR I=1 TO LEN(E$):? E$(I,I);
:NEXT I:GET #1,A:IF A=155 THEN RETURN
5021 GOTO 5000
10000 ? "RUN AT WHAT ADDRESS?";:GET #1
,A
10005 ? :? "NO, LET ME PICK...":GOSUB
800
10007 ? "HOW ABOUT...":GOSUB 800
10010 ? "D01B & D401":? :? "RUNNING..."

```


BUMPAS REVIEWS

SYNFILE+ (\$99) is one unit of the new "Syn-Apps" series developed by Synapse Software and marketed by Atari. This is a very flexible and powerful database management system for any Atari with 48k or more. Comparisons with **Filemanager+** (also by Synapse) are inevitable. And the screen presentation of Synfile+ will seem familiar to Filemanager+ users. But the "pop-up" menus in Synfile+ are much more convenient and allow more efficient operation.

Users are no longer limited to a mere 5 computed fields. In fact, there are no organic restrictions upon the character of any of the 66 fields available for each record. Memory limitations might prevent all 66 fields from containing formulas. Synfile+ seems to make a much more efficient use of memory. I set up a mailing list file in the same format I use with Filemanager+. Synfile+ informs me I can put nearly twice as many records on a disk as with Filemanager+. And Synfile+ says one file may extend into as many as 16 disks. This will let me put at least 10,000 names and addresses in my mailing list! Pretty overwhelming.

The screen display is in 80-column format. You must scroll across to the right-hand window to see the last 40-columns if your display is 40-columns. The user has wide flexibility when formatting the screen display of your information. Field names and data may be placed anywhere on the screen. If you don't like where you put it, you can put the cursor on the first character, select the Moe option with the cursor arrows and simply move the field to another location on the screen. All menu items are easily selected with cursor arrows and the return key. All menus are nested, so only the menu information which is relevant to the particular operation you are performing is in the window at screen bottom.

The package includes utilities which convert "DIF" files to and from Synfile+. This permits data created with Visicalc, Synfile+, SynCalc or Syntrend to be used interchangeably between these programs. The documentation also makes up for an omission in the AtariWriter manual. Here you learn how to merge Synfile+ data into text files developed with AtariWriter.

Synfile+ allows you to select double density format for disks, but remember to change the density back again before you put the program disk in (to avoid Error 138). Error trapping is excellent in this program. I accidentally tried to write a file to the program disk. A couple of polite little beeps and an error message informed me of the problem and permitted me to insert the data disk to complete the operation.

Synfile+ supports ram disk operations with the Axlon boards or the Mosaic 64k Select. Use of two drives is provided for in many instances where there is a great advantage for the facility (as in copying files, etc.) But for normal file creation and data entry, I was forced to put both the program disk and the data disk in drive 1 (requiring some disk swapping). Another obvious shortcoming of Synfile+ is its lack of any utility to convert Filemanager+ data files for use. I am told Synapse is working on a utility to perform this task, so this may be corrected soon. I was looking forward to converting my files. But as I don't want to type in all this data over again, I'll keep using Filemanager+ for awhile.

Synfile+ is the best database manager I've seen for the Atari. I can unequivocally recommend it to anyone who wants to store and manipulate data and who is not heavily committed to another program (such as I am with Filemanager+).

MEGAFILER (XLEnt Software, Box 5228, Springfield, VA 22150, (703) 644-8881, \$30) advertizes itself as "The Ultimate Atari Database Manager." On a price/performance basis, I believe this bit of "puffing" might not be too far off. It is an excellent piece of software.

The program seems to be compiled from BASIC XL by OSS. Documentation includes a 28 page, digest-sized manual and a one page errata. The errata claims the "change should not detract from the usefulness of Megafiler." But the errata lists only 4 valid arithmetic operators (add, subtract, multiply and divide), while the manual lists 8. Anyway, the 4 basic functions are sufficient for most applications.

Megafiler is my kind of program. The menus enabled me to boot up and begin immediately to create a database file of mailing list records. I got stuck with a couple of questions, but the table of contents led me to the page with the answers I needed. I did not have to read the manual before I began. A beginning user will not be intimidated by this program at all.

Program functions include the ability to display any disk directory, to display the format of any database, and to modify the format, in addition to creating, viewing, editing, deleting and sorting records. The program will also generate printed reports and mailing labels. Two title lines are available in the Report Generator. These lines might be used to include print formatting codes, if your printer can accept them. The module does provide for input of the code to print condensed letters for 132 column reports. The Reports module permits you to sum numeric data as a help to analysis.

Each record may contain up to 15 fields of data. Records may contain up to 255 characters. A field may contain up to 90 characters. For most purposes, the limit of up to 3 fields per line on a mailing label will not be a problem. I use 5 fields on one line of my mailing list (containing various identifying information), but I could modify these fields to reduce their number.

The program executes quickly, with excellent trapping of user input errors. A beginner will be comfortable with this program. Advanced users will find it a helpful program also. I don't believe you can get better value for your money spent on a database system.

AROUND THE WORLD (SUPERware, 2028 Kingshouse Road, Silver Spring, MD 20904, \$30) is a family strategy game for one player. The player's goal is to journey around the world in the shortest time. The program provides several ready-made characters you may use, or you may generate your own, with different characteristics.

The game begins in London, and there are 40 regions of the world you must visit before finishing the game. Each region is a free-form maze which scrolls endlessly across several screen pages. There are stores at which you may purchase food, transportation (usually a horse), and numerous other items which may help you on your journey. Each region also has ticket sales offices which are more difficult to find than the other types of store. These ticket offices are the only way to leave a region.

On your journey you will find dusty chests which may contain valuable items. Or they may contain perils which may delay or end (!) your journey. You will meet other characters. Some will be helpful, some will not. Some will harm you. You have a choice to fight, run or persuade upon any encounter. I was trying to be real nice, but after being attacked in Rome by 3 Cardinals in succession, I began killing them off any chance I got. Various random events occur such as floods, fires, landslides and plagues. Each time something bad occurs, you take damage. It seems you regain some strength with a respite, but eventually all the fighting, poison gas, plagues, fires, etc. get to you and kill you. Now you get to see a nice feature of the game. You may reincarnate your character at the point at which you died. You get to do this twice before you are finally killed off.

All player input during the game is by joystick. Each game screen is graphically well drawn, with a text window at the bottom. The colors are bright and appropriate, although the sounds are less well done. The author collaborated with his wife on this effort, and it seems to have helped him avoid some spelling errors, but still a few persist: "ferocity", "Margret" and "Judus", for example. I must be getting old, being irritated by such small things. I have a pre-production copy. I hope this review reaches them in time to proof the spelling.

The program performs very well, indicating an excellent job of coding by the authors. The action is smooth and quick. The game is a lot of fun to play. I predict you will get your \$30 value in enjoyment from this game.

Mastering Your Atari (\$30, Prentice-Hall), by the staff of Micro Magazine, contains 8 programming projects for the intermediate BASIC programmer. A beginner who wants to become more serious will also find this package helpful. For your money, you get a 175 page softback book and a disk or cassette tape containing all the programs used in the book. These programs include "Atari Player" (a music player and editor), "Master" and "Word Detective" (guessing games), "Breakup" (a Breakout clone), "Atari Clock" (digital time display), "Programmable Characters" (character editor), "Sorting" (a demonstration of 5 ways to program sorting routines), and "MicroCalc" (a miniature spreadsheet).

Most of the text of the book is devoted to documenting the uses of the programs, together with detailed program line descriptions, variable tables, and printed program listings. But also included are suggestions for modifying the programs. All this information is very helpful in stimulating the reader's imagination. I find myself thinking of all sorts of applications and modifications I can make to use some of these ideas in my own programs.

For the money, this package is probably worth it to the new user as a sample of interesting program types to run on the Atari, in addition to its obvious value to the intermediate BASIC programmer.

Steve Krenek (KREntek Software, Box 3372, Kansas City, MO 66103) presents the strategy game enthusiast with two very sophisticated real-time games (especially considering they seem to be his first commercial effort). They sell for \$35 each and require 32k RAM (disk or cassette) and a joystick. They seem to boot up with or without BASIC installed, but the manual says to remove all cartridges. They boot up on XL machines without a translator.

ROME and the Barbarians puts you in command of the Roman Empire in the year 400 A.D. If you remember your history, Rome was sacked by the barbarians in 476 A.D. If you can prevent this from happening before the game ends in 476 A.D., you are doing very well indeed.

BUMPAS CONT

I'm very impressed with the quality of programming which has gone into these two programs. The disks I was sent were packaged in a soft mailer and both disks were creased. They boot up just fine, but they are copy-protected so I couldn't make backup copies. I hope the production copies are better protected from the postal service in the mail.

All control over the movement of Roman Legions and paid mercenary Barbarians is by joystick. The units move over a smoothly scrolling map consisting of more than a dozen screens containing mountains, rivers, cities, oceans and clear terrain from Scotland and Ireland in the northwest to Sicily, Carthage and Illyria in the southeast. Three locations on the map provide the only replacement areas where you can muster in new Roman forces into your legions. You will need to protect at least one of these.

The Option key gives you control over expenditures for mercenaries and gifts to allies. But quite often a barbarian tribe will take neither your pay nor your gifts. Sometimes they take the money and desert you. Even Roman Legions may rebel, especially if you let the tax revenues from cities occupied by Roman Legions fall so much that the treasury is completely expended. The Select key will print a graphics screen listing of the names of each barbarian or Roman force and the number (in thousands) of combatants in the space under the cursor. Controlled units may be ordered to dig in or disband from this screen.

Battles produce sounds of fighting, barbarian victories in cities produce sounds of pillage. The colors are bright and attractive, and the graphics are well-drawn. I pretty much mastered the Beginner level of play after a few games (each game takes only an hour or so!). But the Standard game is so far too fast for me, and I do poorly. I don't believe you need to be a wargame enthusiast to enjoy this well-done game. Now if I disband a few more Romans in North Africa and beef up the Rhine front...

NAPOLEON AT WATERLOO is a classic war game, rendered in dozens of paper board games and miniatures displays. Steve Krenak's Atari version gives the feel of the best of these, plus the sounds of cannon and musketry when units collide, and the music of victory when one side or the other achieves a significant advantage. The Marsellaise and God Save the Queen are the two songs played. In fact, you not only hear the cannon boom, but the screen actually shows a cannon shot flying from the artillery to the target.

The player controls the French infantry, cavalry and artillery. The joystick controls all targeting of movement and fire (for artillery). If you want infantry to use musketry, just stop its movement adjacent to its target. If you want to melee with bayonet, move the unit right into the target. The map scrolls over more than 3 screens of terrain containing ridge lines, woods, villages, walled farms and the various military symbols designating the combat units. The button with the cursor on a unit will show you the unit name, number of men and guns in the unit, an evaluation of the unit's morale (from Poor to High, for French units only), and an indication of the state of (dis)organization.

The player must exercise good traffic control in planning the assault, for units will not move through each other. I usually end up blocking my infantry with artillery and cavalry (not a good situation!). However, it is disconcerting to see a routed unit squirt through the crack between two units touching corners on the diagonal! A clock runs from 11:15 am to 9:00 pm on June 18, 1815. This time passes in about an hour or so at which time the battle is over and you may read your score. So far I've not managed to win the battle, but I've scored in the high 90,000s several times (100,000 is needed to win). To start with my scores were abysmal. I've bombarded my own units with French artillery, sent unsupported cavalry right into the face of 30 guns, or massed infantry squares. I've done a number of things which produced only disaster on the field. To win, you will need to have close control over your units and be able to repel the Prussians when they arrive. The British and Allies will not conduct any offensive, although the occasional unit seems to be ready to take advantage of errors in their front, such as seeing some weak units or exposed artillery to go after. The Prussians are almost mindlessly offensive, but if you have some fresh units remaining you can hold them off (or even push them back).

TRAMIEL'S ATARI

Everyone in Ataridom is buzzing with rumors, fears, guesses and predictions regarding what Jack Tramiel will do to or with Atari. Will he make the Atari into a Commodore? This is the most often expressed fear. The question requires an ambiguous response. Atari customer support will surely approach the Commodore level. This cannot be helped given the massive layoffs of personnel. You might try in vain to find any 800 number still in service at Atari. And the surface lines will rarely be responsive.

What about quality control of future Atari products? Well, Atari quality might be expected to suffer somewhat, unless extreme care is taken to prevent "efficiency" from becoming synonymous with "cheapness". Of all the elements of "Commodore" feared by Atarians, compatibility seems to be the most important to us all. Commodore has a reputation for producing computers, no two models of which are compatible with each other. Atari has a reputation for making all of its computers compatible. This is the most significant divergence between Commodore and Atari. In my opinion, this Atari reputation is one of the most significant elements contributing to the public good will towards Atari. I believe Tramiel will be foolish to waste this very important asset. He is not stupid. I believe he will maintain Atari compatibility.

So much for the fears. Tramiel's greatest quality as far as Atari goes is: He knows what to do with a computer company. All Warners ever knew what to do was to rake off the profits. When things began tightening up in the computer market Atari started bleeding (as did many other companies). And Warners didn't know how to stop the bleeding. Just maybe, with Morgan at the helm, Warners could have fixed things. Instead, Warners just amputated Atari. At least Atari is still here. It didn't go the way of TI or Timex. One thing is for certain, Atari in Tramiel's hands will be exciting.

— Jim Bumpas, Co-Editor

SHAPES & SOUNDS FOR THE ATARI

(\$50.00 Herb Moore, Professional Software - John Wiley & Sons, Inc. 1984)

Herb Moore's Shapes and Sounds for the Atari is a well developed introductory packet on the use of computer graphics and sounds. The 2 discs come with a clear 123 page work book. Each disc has a series of short programs exhibiting a particular sound or graphic effect. You receive 11 sound programs and 16 graphics programs with 3 additional sound-graphics programs. Each of these programs may be found fully documented in the work book.

It must be understood this material is not designed as a programming tutorial, but rather as a means for the nonprogrammer to learn about sounds and graphics. However the programs are so clean and the mode of altering them so clear that any programmer might use this material to develop a sound or graphic for a more complex program of their own. Each of the sound and graphics programs are sequentially numbered so you are able to load and combine the various sounds and graphic patterns.

In the first part of the work book you are given an opportunity to study each program, and experiment with combining them. Since the programs are sequentially numbered all the beginner has to do is load the programs and watch the effect. From this point the user is then instructed to load the expandable versions of the programs he has been working with. The expandable programs allows one to directly alter the program currently being run. For example, with an expandable sound program one is taught how to alter pitch, tone, and space. The manipulation is done by the use of a joystick control, with the opportunity to instantly hear the newly created sound by pressing the Start key. The joystick control is quite simple, pushing the control to the top or bottom adds or subtracts to the value of the currently displayed variable by a factor of one, while moving it from side to side adds or subtracts by a factor of ten. The range of sounds a nonprogrammer can achieve is quite astounding. After determining the sound you want you reord it on a work page and then are instructed on how to enter the basic programs and alter them to create the new sound.

The presentation of the graphics programs in the expandable versions allows you to change the color register, hue, and brightness as well as the column and row at which the graphics will appear. Again this is done with a simple menu and the use of the joystick. Later you are shown how to enter and change the setcolor of each program. After learning and experimenting with these basic variables you are shown how to combine graphics modes, use for-next loops, change line numbers, use read data statements, and how to merge with other programs you may be working with. All in all I found this program a fun way to explore the world of graphics and sound. Be warned: Some of the programs can only be run on a computer with a GTIA chip and that in general this software is geared for the beginner or nonprogrammer.

— Nick Chrones

News and Reviews

by Mike Dunn, Co-Editor

Because of the events outlined in my Editorial, many companies marketing Atari software are trying new marketing techniques to sell their products. LJK (7852 Big Bend Blvd., St. Louis MO 63119 314-962-1855) will give you a \$50 credit for any original commercial program disk with documentation towards any LJK product before Jan 1, 1985. This means you can get the new **Letter Perfect** for \$55 with its built in spell checker. **Educational Software** (4565 Cherryvale Soquel, CA 95073) will sell any of its excellent **Tricky Tutorials** for 50% off. Probably more to come.

ACE has a number of new disks in the library. **Best of ACE #9** includes the programs since the last Best of disk, including run time versions of some of the ACTION! programs — not all the programs can be made run-time for some reason. There is a new **ACTION! #2** and **ACTION! #3** source codes, and **Assembly Language Source Codes #2**. **PILOT #3** is also ready. And finally, the official version, completely debugged, fantastic, documented **FILEINDEX**, the original program to keep track of all your disks and much more! This is a commercial quality program, 3 years in development by our founding President Stacy Goff. Versions of this can be found on Compu-Serve, etc. All of the above are \$15 each, \$20 double-sided disk (2 choices). **PILOT** is only \$10. ACE also presents a **Special**. Because we wish to promote the concept of "Freeware", provide a service to our members and increase the sales of our disks, any single sided disk above or in the library can have a copy of **The Home Financial Database** by Richard Kalagher. As is most "Freeware", this is a commercial quality program with built in documentation. The author encourages you to give it to your friends, etc., and if you like it, and want further documentation, updates, etc., you send in money to the author. A very nice financial/checkbook/budget program. If anyone else out there wants to distribute their programs this way, please let me know. **Available on Disk only; you must indicate you want it with your order.** All of the other programs above are also available on tape for the same money.

A new product by Synapse **RELAX** (5221 Central, Richmond, CA 94804, \$100) is really something! It consists of a device attaching to your head which measures muscle tension; and, with the software, is a good device for bio-feedback. It was sent for only a 3 week review period, and since I was on vacation a good part of the time, Jim and Linda Bumpas will review it. Linda is familiar with the use of bio-feedback devices for relaxation purposes. I used it for a short time and it really does work — the software makes the screen look like an oscilloscope, and seems to work just like the very expensive bio-feedback units available at your friendly psychologist's office at \$70 + an hour.

Typesetter (DataArts, POB 1613, Troy, NY 12181, \$30) turns your Atari plus a Centronics 739, Epson, Gemini, Nec 8023A, C. Itoh Pro-writer or Gorilla Banana printer into a very nice typesetting machine. Larry Gold will review it, but our banners, etc., will feature this program for at least a few issues. As good as the \$200 CP/M program, Fancy Font, we used to use, but much easier to use, with somewhat less versatility. Comes with 4 fonts, extra fonts are \$12 for 5.

Super Sketch (RC 4016 Sanquinet FT. Worth, TX 76107, \$50) is a new sketchpad just released for the Atari. I have not seen it, but the price is right.

The nicest piece of mail I got was a wedding announcement for **Doug Carlston** of Broderbund. Doug, his brother Gary and sister Cathy are among the nicest people I know, and all of us at ACE congratulate him and his new wife. I hope she likes to play arcade games!

Remember: the next issue will be devoted to Learning Disabilities. Handicapped, etc., if we get the articles. We have programs, but need your experiences, reviews, etc. as soon as possible.

For the rest of the academic year, meetings will be held the 2nd Weds each month at So. Eugene High School Cafeteria, 7:30 PM. See you all there.

MEETING

WEDNESDAY, SEPTEMBER 12TH

7:30 PM

CAFETERIA

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MONKEY WRENCH II

(\$50 by Eastern House. A machine language cartridge for the 600 & 800XL)

Monkey Wrench II for the XL is improved over the model for the 800. It provides "33 new direct mode Basic Commands". It comes with a 29 page Users Guide, which I find clear and concise. The back of the guide has a useful Quick Reference page, covering the Basic Commands, DOS Functions, Function Keys, and Home Functions. There is no list of the MLM (machine language monitor) commands.

With its many various Direct mode commands the cartridge gives the programmer a great amount of flexibility in the manipulation of his program. There are 19 direct mode Basic functions. They run from the standard Auto Line Numbering system to the Hex and Decimal conversion systems. These commands must be utilized as direct mode commands, that is they may not be entered into a Basic program.

You must also remember that all commands requiring parameters must have at least one space between each parameter. Additionally in the construction of your program you must be sure no line is longer than 120 characters in length, as the Monkey Wrench program will truncate anything greater than this. In all cases the Users Guide clearly states all the precautions one should take.

Besides these direct mode commands you will find a series of 16 MLM (machine language monitor) commands, which should provide assistance to anyone dealing with machine language. Not being versed in machine language I was unable to fully test the usefulness of this part of the system.

Along with the two command groups you have three command function groups. The first being a series of DOS functions. These allow you to obtain disk directories, format disks, unlock & lock files, and rename files. A note of caution here: The format command executes upon entry so you must be sure to have the proper disk already in place.

Next we have the Function keys. This feature prints commonly used commands with a single entry. For example, by pressing Control and 7 key — list 'D' is printed out. The last set of functions are called the Home functions. These functions allow you to move the cursor to four locations on the screen.

Remembering the cautionary notes and dealing with my own limitations as a programmer I found that this system allowed me to program with an ease and speed I had not known before. It in fact has encouraged me to explore some programming challenges I have put off until now. I have found it helpful and it certainly will make a useful addition to anyone's utility collection.

— Nick Chrones

GUMBALL

Gumball is an arcade style game using either a joystick or keyboard input to control the action.

The object of Gumball is to sort colored balls into their own bins, being careful not to mix them and reject the rotten ones. At the higher levels you must also defuse bombs which zealous dental assistants have added to the sugar supply.

At first sight Gumball appears to be a simple game. Because all you have to do is to sort the balls into the correct bins. But if you could make a mistake Mr. Nitpicker will come out and empty that bin and you start over. To make things a little more challenging you have a quota which must be met by the end of your shift, and if you should make a mistake, well they just up your quota. Now if you are sorting just two colors this isn't too bad, three is ok, but trying to sort four or more colors may cause you to permanently lose interest in ever seeing a gumball again.

This game is interesting, challenging, and down right frustrating at times, and it is a nice break from the shoot'em-up games.

Gumball is distributed by Broderbund and requires 48K.

— Chris Browning

Atari Computer Enthusiasts

A.C.E. is an independent, non-profit and tax exempt computer club and user's group with no connection to the Atari Company, a division of Warner Communication Company. We are a group interested in educating our members in the use of the Atari Computer and in giving the latest News, Reviews and Rumors.

All our articles, reviews and programs come from you, our members.

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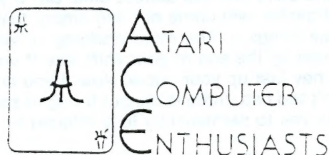
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On line 24 hours a day, except for servicing and updating. Consists of a Tara equipped 48K Atari 400 with a TARA keyboard, 2 double-density double sided disk drives with an ATR 8000 interface, 2- 8" double density disk drives, an Epson MX80 printer, a Hayes SmartModem; running the ARMUDIC Bulletin Board software written by Frank L. Hubbard, 1206 N. Stafford St., Arlington, VA 22201. See the Nov '82 issue for complete details.